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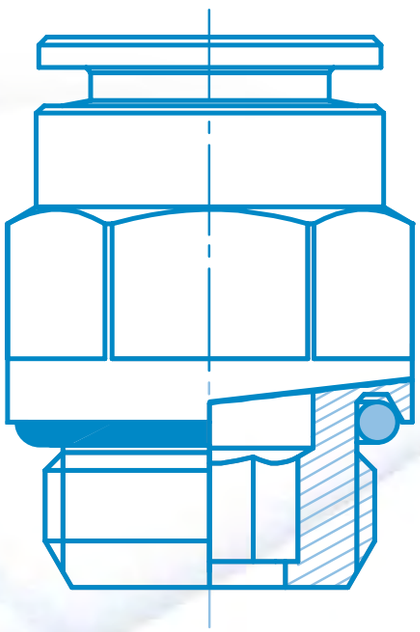

PNEUMATIC FITTINGS

Catalogo Tecnico
Technical Catalogue
Catalogue Tecnique
Technischer Katalog

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Human Instinct for Power Control

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cmatic®

PNEUMATIC FITTINGS

Cmatic nasce agli inizi degli anni 70; dopo un'esperienza di anni maturata come fornitore conto terzi di minuterie metalliche di precisione si espande, si trasforma e da attività artigianale si evolve in vera e propria attività industriale.
La "Mission" aziendale diviene Progettazione, Sviluppo e Produzione di Raccordi per l'Automazione Industriale senza mai perdere la sensibilità alle richieste di un mercato in continua evoluzione e focalizzando la propria attenzione sulla ricerca di nuovi materiali e sullo sviluppo di nuovi prodotti.
Cmatic ottiene la prima certificazione ISO 9001 nel 1994 e grazie al continuo sviluppo del proprio Sistema di Management, consegue nel 2018 anche la certificazione del sistema di gestione ambientale ISO 14001.
Oggi Cmatic è riconosciuta a livello mondiale tra i primi produttori di raccordi per l'automazione industriale grazie alla costante cura dell'aspetto qualitativo, associato ad un'elevata flessibilità aziendale.
Produzioni standard che coprono una gamma completa di prodotti sia da un punto di vista di materiali che di funzionalità, congiuntamente a soluzioni custom in collaborazione con il Cliente rappresentano il core business di Cmatic.

Cmatic was founded in the early '70s; after a long term experience as a subcontractor for precision metal parts, Cmatic starts to expand and turns the craftsman activity into an industrial business.
The company " Mission " becomes Design, Development and Production of fittings for Industrial Automation without losing the sensitivity to the demands of a quickly changing market and focusing the attention on the search for new materials and the development of new products.
Cmatic obtain the first ISO 9001 certificate in 1994 and the continuous Development of the Management Systems lead Cmatic to achieve in 2018 also the Environmental Management Certificate according the ISO 14001.
Today, the relentless care for high quality standards and the company flexibility have led Cmatic to rank globally among the top producers of fittings for industrial automation.
A very comprehensive catalogue products offer featuring different materials, product functions along with custom made solutions developed in cooperation with the customers, represent Cmatic's core business.

Cmatic a été fondée au début des années 70; après de nombreuses années d'expérience en tant que fournisseur de pièces métalliques de précision, Cmatic commence à se développer et la société de l'artisanat se transforme en une véritable entreprise industrielle.
La "mission" de Cmatic est la conception, le développement et la fabrication de raccords pour l'automatisation industrielle ainsi que d'un fort accent sur les besoins les plus exigeants vers nouveaux produits et matériaux d'un marché en constante évolution.
En 1994, Cmatic obtient la première certification ISO 9001. L'évolution constante du système de gestion a permis en 2018 la certification du système de management environnemental selon la norme ISO 14001.
Aujourd'hui Cmatic est compté parmi les plus importants fabricants mondiaux de raccords pour l'automatisation industrielle grâce à l'attention constante à la qualité et à la grande flexibilité de la société.
Une large gamme de produits avec différents matériaux et fonctionnalités et des solutions spéciales conçues en coopération avec les clients, représentent le cœur de métier de Cmatic.

Cmatic wurde in den frühen 70er Jahren gegründet; nach einer langjährigen Erfahrung als Zulieferant für Präzisionsteilen aus Metall, beginnt Cmatic sich zu erweitern und die Handwerksfirma wandelt sich in einem Industriegeschäft um.
Die "Mission" vom Cmatic wird Design, Entwicklung und Herstellung von Verschraubungen für die industrielle Automatisierung mit immer einem großen Augenmerk auf die anspruchsvolleren Anforderungen für neue Materialien und Lösungen eines sich ständig wandelnden Marktes.
Im Jahr 1994 erhält Cmatic die ISO 9001 Zertifizierung. Die ständige Entwicklung des Managementsystems hat im Jahr 2018 auch zur Zertifizierung des Umweltmanagementsystems gemäß ISO 14001 geführt.
Heute wird Cmatic weltweit zu den Top-Herstellern von Verschraubungen für die industrielle Automation gezählt und das ist der ständigen Aufmerksamkeit auf die Qualität und der hohen Flexibilität des Unternehmens zu verdanken.
Eine umfangreiche Produktpalette mit unterschiedlichen Materialien und Funktionen zusammen mit Sonderlösungen in enger Zusammenarbeit mit den Kunden entwickelt, stellen das Kerngeschäft von Cmatic dar.

Tabella di Compatibilità chimica — Chemical compatibility chart - Table compatibilité chimique - Chemische Kompatibilitätstabelle

SOSTANZA	MEDIUM	RACCORDI-FITTINGS RACCORDS - VERSCHRAUBUNGEN			GUARNIZIONI - SEALS JOINTS D'ÉTANCHÉITÉ - DICHTUNGEN			TUBI - HOSES TUBES - SCHLÄUCHE				
		OTTONE BRASS	POM	INOX AI-SI316L	NBR	FPM	EPDM	PA12	PA6	LDPE	PU	P.T.F.E
Acetaldeide	Acetaldehyde											
Acetilene	Acetylene											
Aceto	Vinegar											
Acetone	Acetone											
Acido Acetico (5%)	Acetic Acid (5%)											
Acido Acetico (20%)	Acetic Acid (20%)											
Acido Acetico (50%)	Acetic Acid (50%)											
Acido Arsenico	Arsenic Acid											
Acido Borico	Boric Acid											
Acido Cloridrico (10%)	Hydrochloric Acid (10%)											
Acido Cromico (10%)	Chromic Acid (10%)											
Acido Citrico	Citric Acid											
Acido Formico	Formic Acid											
Acido Fluoridrico (10%)	Hydrofluoric Acid (10%)											
Acido Fosforico (30%)	Phosphoric Acid (30%)											
Acido Glicolico	Glycolic Acid											
Acido Lattico (20°C)	Lactic Acid (20 °C)											
Acido Nitrico (10%)	Nitric Acid (10%)											
Acido Nitroso	Nitrous Acid											
Acido Oleico	Oleic Acid											
Acido Palmitico	Palmitic Acid											
Acido Perclorico (10%)	Perchloric Acid (10%)											
Acido Salicilico	Salicylic Acid											
Acido Solforico (30%)	Sulfuric Acid (30%)											
Acido Solforoso	Sulfurous Acid											
Acido Stearico	Stearic Acid											
Acido Tricloroacetico	Trichloroacetic Acid											
Acido Urico	Uric Acid											
Acqua	Fresh Water											
Acqua di Mare	Sea Water											
Acqua Ossigenata (1%)	Hydrogen Peroxide (1%)											
Acqua Ossigenata (30%)	Hydrogen Peroxide (30%)											
Acqua Regia	Aqua Regia											
Alcool Butilico	Butyl Alcohol											
Alcool Etilico (Etanolo)	Ethyl Alcohol (Ethanol)											
Alcool Metilico (Metanolo)	Methyl Alcohol (Methanol)											
Alcool Isopropilico	Isopropyl Alcohol											
Ammoniaca (10%)	Ammonia (10%)											
Ammomio Acetato	Ammonium Acetate											
Ammonio Carbonato	Ammonium Carbonate											
Ammonio Cloruro	Ammonium Chloride											
Ammonio Nitrato	Ammonium Nitrate											
Ammonio Solfato	Ammonium Sulfate											
Anidride Carbonica	Carbon Dioxide											
Anidride Solforosa	Sulfur Dioxide											
Anilina	Aniline											
Azoto	Nitrogen											
Benzina	Gasoline											
Benzolo	Benzene											
Bicarbonato di Sodio	Sodium Bicarbonate											
Bromuro di Metile	Methyl Bromide											
Bromuro di Metilene	Methylene Bromide											
Butano	Butane											
Carburante Diesel	Diesel Fuel											
Carburante per Jet/Cherosene	Jet Fuel/Kerosene											
Cicloesano	Cyclohexane											
Cloro (secco)	Chlorine (dry)											
Cloro, anidro liquido	Chlorine, Anhydrous liquid											
Cloroformio	Chloroform											
Cloruro di Calcio (10%)	Calcium Chloride (10%)											
Cloruro di Etile	Ethyl Chloride											
Cloruro di Etilene	Ethylene Chloride											
Cloruro di Metile	Methyl Chloride											
Cloruro di Metilene	Methylene Chloride											
Cloruro di Sodio (10%)	Sodium Chloride (10%)											
Cloruro di Zolfo	Sulfur Chloride											
Detergenti	Detergents											
Dibutilftalato	Dibutyl Phthalate											
Dicloroetano	Dichloroethane											
Dimetilftalato	Dimethyl Phthalate											
Diossano	Dioxane											
Eptano	Heptane											
Esano	Hexane											
Etere Etilico	Ethyl Ether											
Fenolo	Phenol											

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Tabella di Compatibilità chimica — Chemical compatibility chart - Table compatibilité chimique - Chemische Kompatibilitätstabelle

SOSTANZA	MEDIUM	RACCORDI-FITTINGS RACCORDS - VERSCHRAUBUNGEN			GUARNIZIONI - SEALS JOINTS D'ÉTANCHÉITÉ - DICHTUNGEN			TUBI - HOSES TUBES - SCHLÄUCHE				
		OTTONE BRASS	POM	INOX AI-SI316L	NBR	FPM	EPDM	PA12	PA6	LDPE	PU	P.T.F.E
Fluido per freni	Brake Fluid											
Formaldeide (37%)	Formaldehyde (37%)											
Freon 12	Freon 12											
Freon 22	Freon 22											
Gas cloro	Chlorine Gas											
Gas nitrosi												
Glicerina	Glycerine											
Glicole	Glycols											
Glicole Etilenico	Ethylene glycol											
Glucosio (soluzione satura)	Glucose											
Idrazina	Hydrazine											
Idrogeno (gas)	Hydrogen (gas)											
Idrogeno Solforato	Hydrogen Sulfide											
Idrossido di Sodio (10%)-Soda Caustica	Sodium Hydroxide (10%) - Caustic Soda											
Insetticidi (D.D.T.)	D.D.T.											
Iodio	Iodine											
Ipoclorito di Calcio (10%)	Calcium Hypochlorite (10%)											
Ipoclorito di Sodio (5%)	Sodium Hypochlorite (5%)											
Isottano	Isooctane											
Metano	Methane											
Metiletilchetone	Methyl Ethyl Ketone											
Nitrato di Ammonio	Ammonium Nitrate											
Nitrato di Calcio	Calcium Nitrate											
Nitrato di Sodio	Sodium Nitrate											
Oli alimentari (vegetali)	Food Oils (vegetable)											
Olio combustibile	Fuel Oil											
Olio di motore	Motor Oil											
Olio lubrificante	Lubricating Oil											
Olio minerale	Mineral Oil											
Ossido di carbonio	Carbon Monoxide											
Ossido nitroso (secco)	Nitrous Oxide											
Ossigeno (Freddo)	Oxigen (Cold)											
Ozono	Ozone											
Paraffina	Paraffin											
Percloroetilene	Perchloroethylene											
Permanganato di Potassio (10%)	Potassium Permanganate (10%)											
Petrolio	Petroleum Oil											
Propano (gas liquido)	Propane (liquefied)											
Solfato di Nichel (10%)	Nickel Sulfate (10%)											
Solfato di Rame (10%)	Copper Sulfate (10%)											
Solfuro di Calcio	Calcium Sulfide											
Succo di frutta	Fruit Juice											
Tetracloruro di Carbonio	Carbon Tetrachloride											
Tetraidrofurano	Tetrahydrofuran											
Toluene (Toluolo)	Toulene (Toulol)											
Trementina/acquaragia minerale	Turpentine											
Tricloroetano	Trichloroethane											
Tricloroetilene	Trichloroethylene											
Urea (5%)	Urea (5%)											
Vapore (< 150 °C)	Steam (< 150 °C)											
Vapore (> 150 °C)	Steam (> 150 °C)											
Vino	Wine											
Xilolo	Xylene											

Ottimo
Very Good
Très bon
Sehr gut

Buono
Good
Bon
Gut

Resistenza Limitata
Limited resistence
Résistance limité
beschränkter Widerstand

Sconsigliato
Not recommended
Pas conseillé
Nicht empfohlen

Dati non disponibili
Information not available
Renseignement non disponible
Auskunft nicht vorhanden

Le indicazioni riportate in tabella hanno carattere puramente indicativo ed il reale comportamento dei materiali va comunque testato nelle condizioni di effettivo utilizzo in quanto fattori come temperatura, pressione e concentrazioni delle sostanze possono far variare di molto i giudizi di compatibilità.

The information given on this chart have to be used as a guide only and the actual materials' reaction has to be tested in the real working conditions as temperature, pressure and different concentrations can affect the mentioned chemical compatibility.

Les renseignements ci-dessus s'entendent purement indicatifs. La réaction des matériaux doit être testée dans les réelles conditions d'emploi, car température, pression et différentes concentrations peuvent changer la compatibilité chimique.

Die oben angegebenen Auskünfte verstehen sich nur als Richtlinie und die konkrete Werkstoffsreaktion muss unter den wirklichen Arbeitsbedingungen getestet werden, da Temperatur, Druck und unterschiedliche Konzentrationen die chemische Kompatibilität beeinflussen können.

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Conversioni per unità di pressione - Conversion chart for Pressure Unit - Table de conversion pour unité de pression - Umrechnungstabelle für Druckeinheiten

		Pa	kPa	Mpa	bar	mbar	atm	p.s.i.	mmHg
1 Pa	=	1	0,001	0,000001	0,00001	0,01	0,0000099	0,000145	0,0075
1 kPa	=	1000	1	0,001	0,01	10	0,00987	0,14504	7,50062
1 Mpa	=	1000000	1000	1	10	10000	9,86923	145,03774	7500,61505
1 bar	=	100000	100	0,1	1	1000	0,98692	14,50377	750,06151
1 mbar	=	100	0,1	0,0001	0,001	1	0,0009869	0,0145	0,75006
1 atm	=	101325	101,325	0,10133	1,01325	1013,25	1	14,69595	759,99982
1 p.s.i.	=	6894,75729	6,89476	0,00689	0,06895	68,9476	0,06805	1	51,71492
1 mmHg	=	133,3224	0,13332	0,00013	0,00133	1,3332	0,00132	0,01934	1

Conversione fra unità di Lunghezza
Conversion chart for Length Unit
Table de conversion pour unité de longueur
Umrechnungstabelle für Längeeinheiten

		m	mm	in	ft
1 m	=	1	1000	39,37008	3,28084
1 mm	=	0,001	1	0,03937	0,00328
1 in	=	0,0254	25,4	1	0,08333
1 ft	=	0,3048	304,8	12	1

Conversione fra temperature
Conversion of temperature units
Conversion des unités de Température
Temperaturumrechnung

K = °C + 273,15

°C = (°F - 32) *5/9

°F = (°C *9/5) + 32

TIPO FILETTATURA Thread Filet Gewinde	RIFERIMENTO NORMA Norm reference Indication de la norme Normangabe	Coppie di serraggio - Tightening torque - Couples de serrage - Drehmomente einhalten (Nm)												
		M3x0,5	M5x0,8	M6x1	M7x1	M8x1	M10x1	M12x1,25	M12x1,5	10-32	1/8	1/4	3/8	1/2
Gas conica con PTFE Gas taper PTFE-coated Gas conique avec PTFE Gas kegelig mit Ptfebeschichtung	UNI EN 10226-1	-	-	-	-	-	-	-	-	-	2,5	3,5	6	12
NPTF con PTFE NPTF PTFE coated NPTF avec PTFE NPTF mit Ptfebeschichtung	ANSI/ASME B1.20.3	-	-	-	-	-	-	-	-	-	3,5	4,5	7	12
Gas cilindrica con O-Ring Gas parallel with O-Ring Gas cylindrique avec Joint Gas zylindrisch mit O-Ring	UNI EN ISO 228-1	-	-	-	-	-	-	-	-	-	1,2	1,5	2,5	3,5
easyThread	CMATIC	-	-	-	-	-	-	-	-	-	1,2	1,5	2,5	3,5
Gas cilindrica in resina acetalica con O-Ring Gas parallel acetal resin threads with O-Ring Gas cylindrique en résine acétal. avec Joint Gas zylindrisch Gewinde ans kunststoff mit O-Ring	UNI EN ISO 228-1	-	-	-	-	-	-	-	-	-	1,2	1,5	2,5	-
Gas cilindrica con rondella in plastica Gas parallel with plastic ring Gas cylindrique avec bague plastique Gas zylindrisch mit Kunststoffring	UNI EN ISO 228-1	-	-	-	-	-	-	-	-	-	2	3	4	8
UNF con O-Ring UNF with O-Ring UNF avec Joint UNF mit O-Ring	ANSI/ASME B1.1	-	-	-	-	-	-	-	-	0,8	-	-	-	-
Metrica con O-Ring Metric with O-Ring Métrique avec Joint Metrisch mit O-Ring	UNI EN ISO 965-1	0,8	0,8	0,8	0,8	-	-	1,5	1,5	-	-	-	-	-
Metrica conica con PTFE Metric taper PTFE-coated Métrique conique avec PTFE Metrisch kegelig mit Ptfebeschichtung	UNI 7707	-	-	2,5	-	2,5	2,5	-	-	-	-	-	-	-

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MO	Raccords à bague en laiton nickelé	MO	Schneidringverschraubungen aus Messing vernickelt	157
OX	Raccords à bague en Acier Inox 316L	OX	Schneidringverschraubungen aus Edelstahl 1.4404	165
RA	Raccords Standard en laiton nickelé	RA	Standardverschraubungen aus Messing vernickelt	173
PA	Raccords Standard en laiton nickelé, NPT	PA	Standardverschraubungen aus Messing vernickelt, NPT	188
RF	Raccords Standard pour le domaine alimentaire et des boissons	RF	Standardverschraubungen für Lebensmittel-und Getränkeanwendungen	193
RX	Raccords Standard en Acier Inox 316L	RX	Standardverschraubungen aus Edelstahl 1.4404	199
new RT	Raccords Standard pour systèmes de freinage pneumatique	new RT	Standardverschraubungen für Druckluftbremssysteme	209
GU	Coupleurs	GU	Kupplungen	209
PU	Coupleurs, NPT	PU	Kupplungen, NPT	221
GU Safety	Coupleurs de Sécurité	GU Safety	Sicherheitskupplungen	225
PU Safety	Coupleurs de Sécurité, NPTPUX	PU Safety	Sicherheitskupplungen, NPT	239
GX	Coupleurs en Acier Inox 316L	GX	Kupplungen aus Edelstahl 1.4404	247
PUX	Coupleurs en Acier Inox 316L, NPT	PUX	Kupplungen aus Edelstahl 1.4404, NPT	251
GX Safety	Coupleurs de Sécurité en Acier Inox 316L	GX Safety	Sicherheitskupplungen aus Edelstahl 1.4404	255
CO A	Multi-coupleurs avec carcasse en métal	CO - A	Vielfachverbinder mit Metallhülle	259
CO B	Multi-coupleurs passe-cloison et en ligne	CO - B	Schott-und-In-Linie Vielfachverbinder	270
MV	Raccords à fonction	MV	Funktionsverschraubungen	273
PV	Raccords à fonction en pouce/NPT	PV	Funktionsverschraubungen, Zoll/NPT	309
VX	Raccords à fonction en Acier Inox 316L	VX	Funktionsverschraubungen aus Edelstahl 1.4404	325
PVX	Raccords à fonction en acier Inox 316L, Pouce/NPT	PVX	Funktionsverschraubungen aus Edelstahl 1.4404, Zoll/NPT	337
new VT	Raccords à fonction pour systèmes de freinage pneumatique	new VT	Funktionsverschraubungen für Druckluftbremssysteme	343
Tools: TCUT, TGUN, TINC, Outil à percer, Outil pour le montage, TREL		Tools: TCUT, TGUN, TINC, Bohrenwerkzeug, Einpresswerkzeug, TREL		347
Tubes: PA 12, PA 6, PA 6.6, PA 12 HR, PU, LDPE, P.T.F.E.		Schläuche: PA 12, PA 6, PA 6.6, PA 12 HR, PU, LDPE, P.T.F.E.		353

AUTOMAZIONE PNEUMATICA

Pneumatica Generale

Raccordi Automatici	MA	MB	AP	AR	PN	PE
Raccordi a Calzamento	MC					
Raccordi a Ogiva	MO					
Raccordi Standard	RA	PA				
Innesti Rapidi	GU	PU	GU Safety	PU Safety		
Connettori Multipli	CO					
Raccordi a Funzione	MV	PV				

Alimentare, Chimico-Farmarceutico, Vending Machine

Raccordi Automatici	AV	MF	MX	PX
Raccordi a Calzamento	CX			
Raccordi a Ogiva	OX			
Raccordi Standard	RF	RX		
Innesti Rapidi	GX	PUX	GX Safety	
Raccordi a Funzione	VX	PVX		

LUBRIFICAZIONE

Raccordi Automatici	HP	MP	PM

NEBULIZZAZIONE

Raccordi Automatici	MM

TRASPORTI

Raccordi Automatici	MT	PT
Raccordi Standard	RT	
Raccordi a Funzione	VT	

IDRAULICA

Raccordi Automatici	QO

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PNEUMATIC AUTOMATION

General Pneumatics

Push in Fittings	MA	MB	AP	AR	PN	PE
Push on Fittings	MC					
Compression Fittings	MO					
Standard Fittings	RA	PA				
Couplings	GU	PU	GU Safety	PU Safety		
Multiple Connectors	CO					
Function Fittings	MV	PV				

Food, Chemical, Pharma, Vending Machines

Push in Fittings	AV	MF	MX	PX
Push on Fittings	CX			
Compression Fittings	OX			
Standard Fittings	RF	RX		
Couplings	GX	PUX	GX Safety	
Function Fittings	VX	PVX		

LUBRICATION

Push in Fittings	HP	MP	PM

MISTING

Push in Fittings	MM

TRANSPORTATION

Push in Fittings	MT	PT
Standard Fittings	RT	
Function Fittings	VT	

HYDRAULICS

Push in Fittings	QO

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MA LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi Automatici
Push-in Fittings
Raccords Instantanés
Steckverschraubungen

I

I Raccordi Automatici della serie MA realizzati completamente in ottone sono il prodotto ideale per effettuare rapide connessioni nelle più svariate applicazioni Industriali; robusti e compatti i raccordi MA garantiscono ottime performance nel tempo.
Tutti i raccordi della serie MA vengono sottoposti a trattamento superficiale di Nichelatura elettrolitica.

GB

The push-in fittings of the MA line are completely made of brass and they are suitable for quick connections in different industrial applications; they are robust, compact and guarantee high performances in time.
All MA fittings are electrolytic nickel-plated.

F

Les raccords de la série MA, entièrement en laiton, sont le produit idéal pour réaliser des connexion rapides dans plusieurs domaines industriels; robustes et compactes les MA garantissent une performance excellente dans le temps.
Tous les raccords de la série MA sont en laiton et soumis au traitement de nickelage électrolytique.

D

Die MA Verschraubung, komplett aus Messing, ist ideal für schnelle Verbindungen und für zahlreiche Anwendungsbereiche; fest und kompakt, gewährleisten die MA Verschraubung hervorragende Leistungen im Laufe der Zeit.
Die MA Verschraubungen sind aus Messing, elektrolytisch vernickelt.

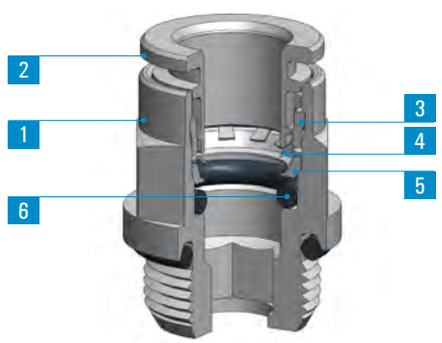
MA

1 - 2	3	4	5	6
Corpo ed Anello Estrattore Body and Release Ring Corps et poussoir Körper und Lösering	Anello di Ritegno Holding Ring Bague de retenue Haltering	Pinza aggraffaggio Gripping ring Pince Spannzange	Anello portapinza Protection Ring Bague protection Schutzring	Guarnizioni Seals Joint d'étancheité Dichtung
Ottone UNI EN 12164 CW614N - UNI EN 12165 CW617N Nichelato Brass UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickel Plated Laiton UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickelé Messing UNI EN 12164 CW614N - UNI EN 12165 CW617N vernickelt	Resina Acetalica (POM) Acetal Resin (POM) Résine acétal (POM) Azetalharz (POM)	Acciaio INOX AISI 301 Stainless steel AISI 301 Acier Inox AISI 301 Edelstahl AISI 301	Resina Acetalica (POM) Acetal Resin (POM) Résine acétal (POM) Azetalharz (POM)	NBR NBR NBR NBR

-20°C ÷ 80°C

Max 20 bar

-99 KPa



	M3x0,5	M5x0,8	M6x1	M7x1	M12x1,25	M12x1,5	G1/8	G1/4	G3/8	G1/2	G3/4	R1/8	R1/4	R3/8	R1/2
3	●	●													
4		●	●	●			●	●				●	●		
6		●	●	●	●	●	●	●	●	●		●	●	●	
8							●	●	●	●		●	●	●	●
10							●	●	●	●		●	●	●	●
12									●	●			●	●	●
14									●	●				●	●
16										●	●				

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Polietilene PE, Poliuretano PU (98 Shore A).
Tolleranze accettabili sui tubi:
+/– 0,07 mm fino a Ø 10 mm
+/– 0,1 mm da Ø 12 a Ø 16 mm.

Campi di applicazione:
Impianti pneumatici.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyethylene PE, Polyurethane PU (98 Shore A).
Acceptable Tolerances on the tubings:
+/– 0,07 mm up to Ø 10 mm
+/– 0,1 mm from Ø 12 up to Ø 16 mm.

Application fields:
Pneumatic circuits.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
PA11, PA12, PA6, Polyethylene PE, Polyurethane PU (98 Shore A).
Tolerances sur les tubes:
+/– 0,07 mm jusqu'au Ø 10 mm
+/– 0,1 mm de Ø 12 jusqu'au Ø 16 mm.

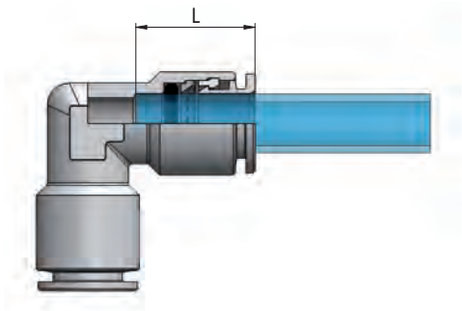
Domaines d'application:
Circuits pneumatiques.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyethylen PE, Polyurethan PU (98 Shore A).
Schlauchtoleranzen:
+/– 0,07 mm bis Ø 10 mm
+/– 0,1 mm von Ø 12 bis Ø 16 mm.

Anwendungsbereiche:
Pneumatik

Profondità di inserimento del tubo | Tubing insertion depth | Profondeur d'insertion du tube | Schlaucheinstecktiefe



Øe Tube	L
3	9,8
4	13,2
6	16,1
8	16,2
10	18,3
12	19,5
14	22,5
16	22,5

ISTRUZIONI DI MONTAGGIO

1. Tagliare il tubo a 90° (servendosi della pinza tagliatubo TCUT) verificando l'assenza di bave interne ed esterne e facendo attenzione che il tubo non si presenti ovalizzato dopo il taglio.
   In caso di utilizzo di tubo metallico praticare una scanalatura sul tubo mediante apposito apparecchio (TINC). L'esecuzione della scanalatura sul tubo deve essere in funzione del diametro del tubo in modo da permettere il corretto aggraffaggio della pinza di tenuta del raccordo.
2. Inserire il tubo nel raccordo spingendolo fino in battuta.

Estrazione del tubo
Esercitare una leggera pressione sull'anello estrattore, estraendo contemporaneamente il tubo dal corpo del raccordo.

ASSEMBLY INSTRUCTIONS

1. Cut the tube square (by means of a hose cutter i.e. our TCUT) making sure that no burrs are left and that the tube is not oval.
   In case of use with metal hoses, make a groove all around the tube diameter with a suitable tool (TINC).The groove must be made according to the tube diameter so that the fitting collect can better grip onto it.
2. Insert the tube into the fitting until it bottoms.

Tube release
While pressing on the release ring, pull out the tube from the fitting.

INSTRUCTIONS DE MONTAGE

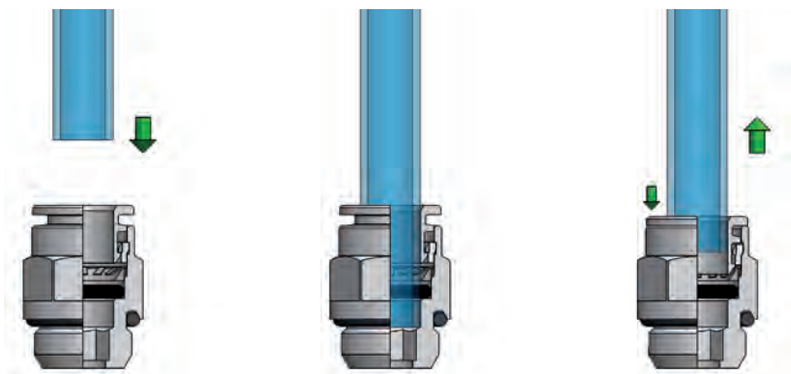
1. Sectionner le tube à 90° par notre coupe tube TCUT en prenant soin de ne par créer des bavures et de ne pas ovaliser le tube.
   Pour l'emploi avec des tubes en métal, pratiquer une rainure le long du diamètre du tube par un outil adéquat pour l'usage (TINC). La rainure devra toujours être en fonction du diamètre du tube, pour que la pince puisse bien l'agrafer.
2. Pousser le tube jusqu' au fond du raccord.

Débranchement du tube
Appuyer sur le poussoir en métal et tirer simultanément sur le tube.

MONTAGEANWEISUNGEN

1. Schlauch mittels unserer Schlauchschere (TCUT) 90° abschneiden und entgraten. Bei Montage mit Metallrohren, eine Nut um den Rohrdurchmesser herum mit dem dazu geeigneten Werkzeug machen (TINC). Die Nut muss im Verhältnis zu dem Rohrdurch messer stehen, damit die Spannange gut daran klammern kann.
2. Darauf achten, daß der Schlauch danach nicht oval gequetscht ist und dann ihn is zum Verschraubungsanschlag einstecken.

Schlauchlösen
Auf den Druckring drücken und gleichzeitig den Schlauch rausziehen.



Effettuato il collegamento, assicurarsi che il tubo inserito nel raccordo non sia sottoposto ad alcuna forza di trazione; è necessario inoltre rispettare durante il collegamento del tubo il raggio minimo di curvatura consigliato così come riportato nella sezione tubi di questo catalogo tecnico (vedi pag. 363)
Al fine di evitare lo sgancio involontario del tubo nessun oggetto deve venire a contatto con l'anello estrattore del raccordo evitando così l'esercizio di qualsiasi forza indesiderata, anche solo laterale, che potrebbe causare la pressione dell'anello estrattore e conseguente rilascio del tubo.
Per il serraggio delle parti filettate del raccordo si raccomanda di attenersi alle coppie consigliate riportate a pag.6

Once the tubing is connected to the fitting, make sure that the tubing is not subject to any tensile strength and that the min. recommended bending radius stated in the tubing section of this catalogue is complied with (see page 363).
To prevent any accidental tube release, no components have to come in touch with the release ring and exercise any unwanted pressure on the same. Indeed however lateral, any load on the release ring may cause the tube disconnection.
To tighten threads, please check out our tightening torque chart illustrated at page 6.

Une fois effectué le branchement, s'assurer que le tube inséré dans le raccord n'est soumis à aucune force de traction. Egalement, il est nécessaire de respecter, lors du branchement du tube, le rayon minimum de courbure conseillé dans la section tubes de ce catalogue technique (voir la page 363). Afin d'éviter le décrochage involontaire du tube, aucun objet ne doit entrer en contact avec la bague d'extraction du raccord, empêchant ainsi l'exercice de toute force indésirable, ne serait-ce que latérale, qui pourrait provoquer la pression de la bague d'extraction et donc le relâchement du tube.
Pour le serrage des parties filetées du raccord, il est recommandé de s'en tenir aux couples de serrage conseillés et reportés à la page 6.

Nach der Schlauchverbindung, sicherstellen, dass der in die Verschraubung eingeführte Schlauch keinen Zugbelastungen ausgesetzt ist; beim Anschluss des Schlauchs muss der empfohlene Mindestbiegeradius eingehalten werden, gemäß den in diesem technischen Katalog im Schlauchabschnitt, angegebenen Hinweisen (siehe Seite 363).
Um das versehentliche Lösen des Schlauchs zu verhindern, darf kein Gegenstand den Lösering der Verschraubung berühren. Keine unerwünschte Kraft darf auch nicht seitlich einwirken und kein Druck soll auf den Lösering ausgeübt werden, denn dies das Schlauchlösen verursachen könnte.
Zum Festziehen der Gewinde sich an den, auf Seite 6, empfohlenen Drehmomente einhalten.

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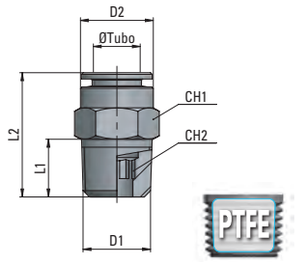
MA 11

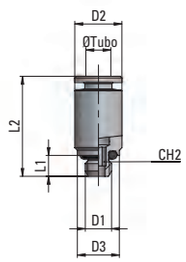
Diritto maschio conico | Taper straight, male | Union simple mâle conique | Gerade Einschraubverschraubung, kegelig



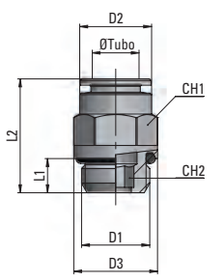
Type	Ø Tubo	D1	D2	L1	L2	CH1	CH2	g
11 04 18	4	R1/8	9	7,5	16	10	3	5,5
11 04 14	4	R1/4	9	11	20,5	14	3	16,1
11 06 18	6	R1/8	11,9	7,5	21	12	4	8,7
11 06 14	6	R1/4	11,9	11	20,5	14	4	15,8
new 11 06 38	6	R3/8	11,9	11,5	21	17	4	-
11 08 18	8	R1/8	13,9	7,5	25	14	6	13,2
11 08 14	8	R1/4	13,9	11	23,5	14	6	13,9
11 08 38	8	R3/8	13,9	11,5	22,5	17	6	23,6
new 11 08 12	8	R1/2	13,9	14	25	22	6	-
new 11 10 18	10	R1/8	15,9	7.5	28	16	6	-
11 10 14	10	R1/4	15,9	11	30,5	16	8	20,2
11 10 38	10	R3/8	15,9	11,5	24	17	8	20
11 10 12	10	R1/2	15,9	14	27	22	8	47,5
11 12 14	12	R1/4	18,9	11	32	19	8	28,5
11 12 38	12	R3/8	18,9	11,5	27,5	19	10	24,1
11 12 12	12	R1/2	18,9	14	27,5	22	10	42,3
11 14 38	14	R3/8	21,9	11,5	35,5	22	10	40,1
11 14 12	14	R1/2	21,9	14	32,5	22	12	39,5

MA 12

Diritto maschio cilindrico | Parallel straight, male | Union simple mâle cylindrique | Gerade Einschraubverschraubung, zylindrisch



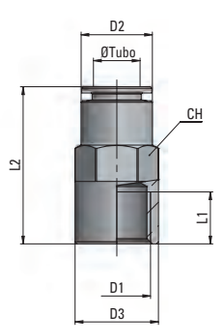
Type	Ø Tubo	D1	D2	D3	L1	L2	CH1	CH2	g
12 03 M3	3	M3x0,5	6,5	5,6	3	15,5	-	1,5	1,4
12 03 M5	3	M5x0,8	6,5	7	4	15,8	-	2	2,3
12 04 M5	4	M5x0,8	9	8	4	19	-	2,5	4,4
12 04 M6	4	M6x1	9	9	4,5	19,5	-	3	4,3
12 04 M7	4	M7x1	9	9	5	20	-	3	5
12 06 M5	6	M5x0,8	12	8	4	22,2	-	2,5	8,6
12 06 M6	6	M6x1	12	9	4,5	22,8	-	3	8,9
12 06 M7	6	M7x1	12	9,1	5	23	-	3	9,5



Type	Ø Tubo	D1	D2	D3	L1	L2	CH1	CH2	g
12 04 18	4	G1/8	9	13	5	16,5	9	3	6,1
12 04 14	4	G1/4	9	16	6,5	18,5	9	3	12
12 06 M12x1,25	6	M12x1,25	11,9	15	6,5	21	12	4	11,8
12 06 M12x1,5	6	M12x1,5	11,9	15	6,5	21	12	4	12,9
12 06 18	6	G1/8	11,9	13,5	5	19,5	12	4	9,1
12 06 14	6	G1/4	11,9	16	6,5	19,5	12	4	12,7
new 12 06 38	6	G3/8	11,9	20	7	20,5	12	4	-
new 12 06 12	6	G1/2	11,9	25	8,5	22,5	12	4	-
12 08 18	8	G1/8	13,9	14,5	5	23,5	13	6	11,5
12 08 14	8	G1/4	13,9	16	6,5	21,5	14	6	13,9
12 08 38	8	G3/8	13,9	20	7	21	14	6	20,1
12 08 12	8	G1/2	13,9	25	8,5	23	14	6	34,3
new 12 10 18	10	G1/8	15,9	13	5	26.5	15	8	-
12 10 14	10	G1/4	15,9	16,5	6,5	27,5	15	8	17,5
12 10 38	10	G3/8	15,9	20	7	25	16	8	22,6
12 10 12	10	G1/2	15,9	25	8,5	25,5	16	8	34,5
12 12 14	12	G1/4	18,9	21	6,5	28,5	19	8	26,2
12 12 38	12	G3/8	18,9	21	7	28,5	19	10	29
12 12 12	12	G1/2	18,9	25	8,5	26,5	19	10	36,1
12 14 38	14	G3/8	21,9	25	7	32	22	10	37,5
12 14 12	14	G1/2	21,9	25	8,5	32	22	12	42,4
12 16 12	16	G1/2	23,7	28	8,5	34,5	25	13	53,6
12 16 34	16	G3/4	23,7	32	9,5	32	24	13	68,2

MA 13

Diritto femmina | Female straight | Union simple femelle | Gerade Aufschraubverschraubung



Type	Ø Tubo	D1	D2	D3	L1	L2	CH	g
13 04 18	4	G1/8	9	13	7	23,5	9	10
13 06 18	6	G1/8	11,9	14	7	26	12	15,1
13 06 14	6	G1/4	11,9	16	10	30	12	18,5
13 08 18	8	G1/8	13,7	16,2	7	26	14	17,5
13 08 14	8	G1/4	13,9	16	10	30	14	20,2
13 08 38	8	G3/8	13,9	20	11	31	14	25,9
13 10 14	10	G1/4	15,9	18,5	10	32	16	24,4
13 10 38	10	G3/8	15,9	20	11	33,5	16	30,3
13 10 12	10	G1/2	15,9	25	11	36,5	16	45
13 12 38	12	G3/8	19	23,1	11	34	20	38,3
13 12 12	12	G1/2	18,8	25	11	37	19	50,9

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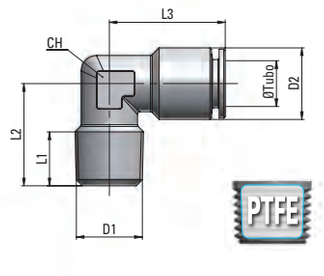
MA 14

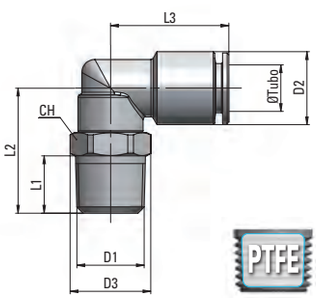
Gomito maschio conico | Taper elbow fitting, male | Raccord à coude mâle conique | Winkelverschraubung, kegelig



Type	Ø Tubo	D1	D2	L1	L2	L3	CH	g
14 04 18	4	R1/8	9	7,8	15	17,5	8	8,1
14 04 14	4	R1/4	9,1	10	19	17,5	10	13,9
14 06 18	6	R1/8	12	8,2	15,5	20,5	10	13,2
14 06 14	6	R1/4	12	10	19	20,5	10	16,7
14 08 18	8	R1/8	14	7,5	19	22,5	12	19,6
14 08 14	8	R1/4	14	10,5	20	22,5	12	22,6
14 10 14	10	R1/4	16	9,5	22	25	14	27,1
14 10 38	10	R3/8	16	10,8	22,5	25	14	32,1

MA 15

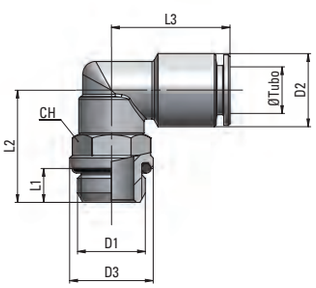
Gomito maschio conico girevole | Taper swivelling elbow fitting, male | Raccord à coude tournant, mâle conique | Schwenkbare Winkelverschraubung, kegelig



Type	Ø Tubo	D1	D2	D3	L1	L2	L3	CH	g
15 04 18	4	R1/8	9,1	11,2	7,5	17,85	19,5	10	10,8
15 04 14	4	R1/4	9,1	15,5	11	24,2	19,5	14	20,9
15 06 18	6	R1/8	12	14,5	7,5	20,2	22	13	19,4
15 06 14	6	R1/4	12	15,5	11	24,2	22	14	23,9
new 15 06 38	6	R3/8	12	20	11,5	25,2	22	18	-
15 08 18	8	R1/8	14	14,5	7,5	20	22,5	13	23
15 08 14	8	R1/4	14	15,5	11	24	22,5	14	26,4
15 08 38	8	R3/8	14	20	11,5	27	23	18	39,2
new 15 08 12	8	R1/2	14	24,5	14	31	23	22	-
new 15 10 18	10	R1/8	16	20	7,5	26,5	23	18	-
15 10 14	10	R1/4	16	20	11	26,5	26	18	38,6
15 10 38	10	R3/8	16	20	11,5	27	26	18	41
new 15 10 12	10	R1/2	16	24,5	14	31	26	22	-
new 15 12 14	12	R1/4	19	22,5	11	30	28,5	20	-
15 12 38	12	R3/8	19	22,5	11,5	30,5	28,5	20	61,8
15 12 12	12	R1/2	19	24,5	14	33,5	28,5	22	71,5
15 14 38	14	R3/8	22	22,5	11,5	30,5	32	20	66,2
15 14 12	14	R1/2	22	24,5	14	33,5	32	22	74,6

MA 16

Gomito maschio cilindrico girevole | Parallel swivelling elbow fitting, male | Raccord à coude tournant, mâle cylindrique | Schwenkbare Winkelverschraubung, zylindrisch



Type	Ø Tubo	D1	D2	D3	L1	L2	L3	CH	g
16 03 M5	3	M5x0,8	7	7,9	4	13,7	14	7	7,1
16 04 M5	4	M5x0,8	9,1	10	4	14	17,5	9	8,8
16 04 M6	4	M6x1	9,1	10	4,5	14,5	17,5	9	8,7
16 04 18	4	G1/8	9,1	14,5	5	18,2	19,5	13	15,7
16 04 14	4	G1/4	9,1	16	6,5	21,7	19,5	13	19
16 06 M5	6	M5x0,8	12	10	4	14	20,5	9	11,9
16 06 M6	6	M6x1	12	10	4,5	14,5	20,5	9	12
16 06 M12x1,25	6	M12x1,25	12	15	6,5	21,7	22	13	22
16 06 M12x1,5	6	M12x1,5	12	15	6,5	21,7	22	13	21,5
16 06 18	6	G1/8	12	14,5	5	18,2	22	13	18,5
16 06 14	6	G1/4	12	16	6,5	21,7	22	13	22
new 16 06 38	6	G3/8	12	20	7	22,2	22	13	-
new 16 06 12	6	G1/2	12	25	8,5	24,2	22	13	-
16 08 18	8	G1/8	14	14,5	5	18	22,5	13	22
16 08 14	8	G1/4	14	16	6,5	21,5	22,5	13	26
16 08 38	8	G3/8	14	20	7	25,5	23	16	36,8
16 08 12	8	G1/2	14	25	8,5	27,5	23	16	41
new 16 10 18	10	G1/8	16	18	5	20,5	26	16	-
16 10 14	10	G1/4	16	18	6,5	22	26	16	32,5
16 10 38	10	G3/8	16	20	7	25,5	26	16	39,5
16 10 12	10	G1/2	16	25	8,5	27,5	26	16	43,2
16 12 14	12	G1/4	19	22,5	6,5	25,5	28,5	20	58,5
16 12 38	12	G3/8	19	22,5	7	26	28,5	20	57
16 12 12	12	G1/2	19	25	8,5	30,5	28,5	20	65,1
16 14 38	14	G3/8	22	22,5	7	26	32	20	61,6
16 14 12	14	G1/2	22	25	8,5	30,5	32	20	68,5
16 16 12	16	G1/2	24	27	8,5	33	36,5	25	105,2
16 16 34	16	G3/4	24	32	9,5	35	36,5	25	113,8

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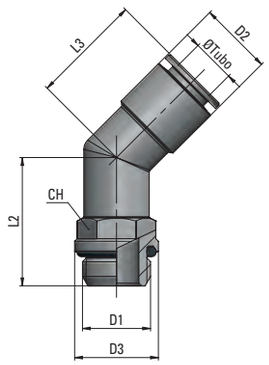
MA 16-45

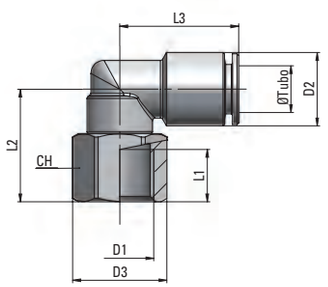
Gomito maschio cilindrico girevole, 45° | Parallel Swivelling Elbow Fitting, male 45° | Raccord à coude tournant, mâle cylindrique | Schwenkbare Winkelverschraubung, zylindrisch 45°



	Type	Ø Tubo	D1	D2	D3	L1	L2	L3	CH	g
new	16 06 18 -45	6	G1/8	12	12,8	5	21	21	13	-
new	16 06 14 -45	6	G1/4	12	16	6,5	24,5	21	13	-
new	16 08 18 -45	8	G1/8	14	12,8	5	21	21	13	-
new	16 08 14 -45	8	G1/4	14	16	6,5	24,5	21	13	-
new	16 10 14 -45	10	G1/4	16	16	6,5	23	25	13	-
new	16 10 38 -45	10	G3/8	16	20	7	26,5	25	16	-
new	16 12 38 -45	12	G3/8	20	20	7	26	25	16	-
new	16 12 12 -45	12	G1/2	20	25	8,5	30,5	25	20	-

MA 17

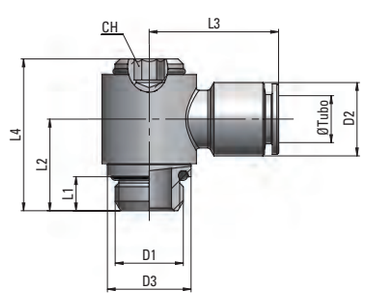
Gomito girevole, femmina | Swivelling elbow fitting, female | Raccord à coude tournant femelle | Drehbare Winkel-Aufschraubverschraubung



Type	Ø Tubo	D1	D2	D3	L1	L2	L3	CH	g
17 04 18	4	G1/8	9,1	14,5	6,5	17,9	19,5	13	17,3
17 06 18	6	G1/8	12	14,5	6,5	17,9	22	13	19,7
17 06 14	6	G1/4	12	18	10	22,2	22	16	25,4
17 08 18	8	G1/8	14	14,5	6,5	17,7	22,5	13	23,1
17 08 14	8	G1/4	14	18	10	22	22,5	16	29,1
17 10 14	10	G1/4	16	18	10	23	26	16	35,6
17 10 38	10	G3/8	16	22,5	10,5	25	26	20	43,5

MA 18

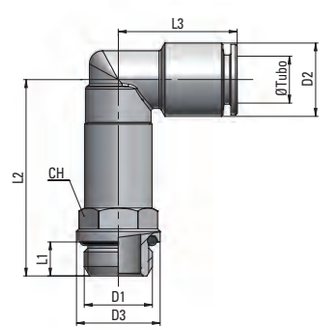
Girevole con anello singolo | Swivelling fitting with banjo ring | Raccord tournant avec banjo | Schwenkverschraubung mit Ringstück



Type	Ø Tubo	D1	D2	D3	L1	L2	L3	L4	CH	g
18 03 M3	3	M3x0,5	6,8	7	3	8,5	14	14	2	4,6
18 03 M5	3	M5x0,8	6,8	7	4	9,5	14	15	2	8,1
18 04 M5	4	M5x0,8	9	10	4	11	18,5	19,1	3	10,1
18 04 18	4	G1/8	9,1	14	5	15	20,5	25,5	4	22,2
18 06 M5	6	M5x0,8	12	10	4	11	21,5	19,1	3	13,3
18 06 18	6	G1/8	12	14	5	15	22,5	25,5	4	24,4
18 06 14	6	G1/4	12	18	6,5	17,5	24	29	5	39,3
18 08 18	8	G1/8	14	14	5	15	23,5	25,5	4	25,7
18 08 14	8	G1/4	14	18	6,5	17,5	24,5	29	5	39,1
18 10 14	10	G1/4	16	18	6,5	17,5	27	29	5	43,6
18 10 38	10	G3/8	16	22	7	19,5	29	32,5	6	62,2
18 12 38	12	G3/8	19	22	7	19,5	29,5	32,5	6	67,1
18 12 12	12	G1/2	19	26	8,5	24	31,5	39,6	8	114,8

MA 19

Gomito maschio cilindrico girevole prolungato | Swivelling extended elbow fitting, male, parallel | Coude long tournant, mâle cylindrique | Verlängerte Winkelverschraubung, drehbar und zylindrisch



Type	Ø Tubo	D1	D2	D3	L1	L2	L3	CH	g
19 04 18	4	G1/8	9,1	14,5	5	29,2	19,5	13	25,6
19 06 18	6	G1/8	12	14,5	5	32,2	22	13	30,5
19 06 14	6	G1/4	12	16	6,5	35,7	22	13	30,9
19 08 18	8	G1/8	14	14,5	5	34	22,5	13	35,7
19 08 14	8	G1/4	14	16	6,5	37,5	22,5	13	36

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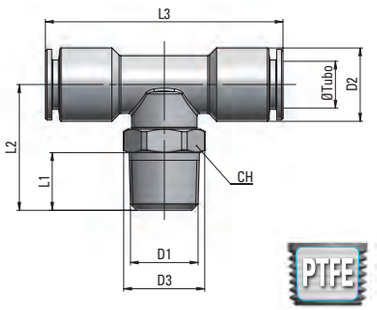
MA 20

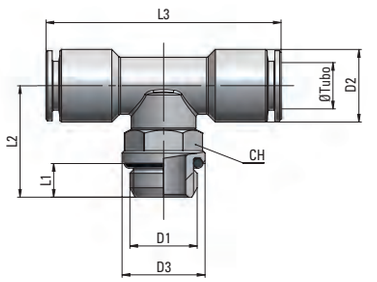
T Centrale maschio conico girevole | Swivelling tee fitting, taper | Raccord à té tournant, mâle conique | T-Verschraubung, schwenkbar und kegelig



Type	Ø Tubo	D1	D2	D3	L1	L2	L3	CH	g
20 04 18	4	R1/8	9,1	14,5	7,5	20,2	39	13	21,5
20 04 14	4	R1/4	9,1	15,5	11	24,2	39	14	25,6
20 06 18	6	R1/8	12	14,5	7,5	20	44	13	26,3
20 06 14	6	R1/4	12	15,5	11	24	44	14	30,4
20 08 18	8	R1/8	14	14,5	7,5	20	45	13	31,3
20 08 14	8	R1/4	14	15,5	11	24	45	14	35,3
20 08 38	8	R3/8	14	20	11,5	27	46	18	49,1
20 10 14	10	R1/4	16	20	11	26,5	52	18	50
20 10 38	10	R3/8	16	20	11,5	27	52	18	51,6
20 12 38	12	R3/8	19	22,5	11,5	30,5	57	20	80
20 12 12	12	R1/2	19	24,5	14	33,5	57	22	83,5

MA 21

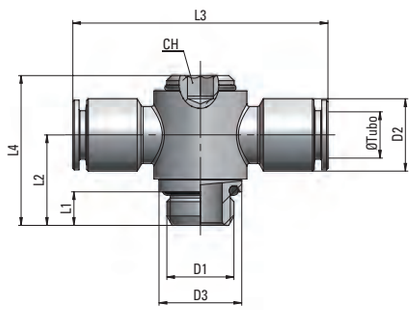
T centrale maschio cilindrico girevole | Swivelling tee fitting, parallel | Raccord à té tournant, mâle cylindrique | T-Verschraubung, schwenkbar und zylindrisch



Type	Ø Tubo	D1	D2	D3	L1	L2	L3	CH	g
21 04 18	4	G1/8	9,1	14,5	5	18,2	39	13	20,2
21 04 14	4	G1/4	9,1	16	6,5	21,7	39	13	23,9
21 06 18	6	G1/8	12	14,5	5	18	44	13	25,2
21 06 14	6	G1/4	12	16	6,5	21,5	44	13	29,1
21 08 18	8	G1/8	14	14,5	5	18	45	13	30,7
21 08 14	8	G1/4	14	16	6,5	21,5	45	13	34,1
21 08 38	8	G3/8	14	20	7	25,5	46	16	46,4
21 10 14	10	G1/4	16	18	6,5	22	52	16	44,4
21 10 38	10	G3/8	16	20	7	25,5	52	16	49,7
21 12 38	12	G3/8	19	22,5	7	26	57	20	75,3
21 12 12	12	G1/2	19	25	8,5	30,5	57	20	82

MA 22

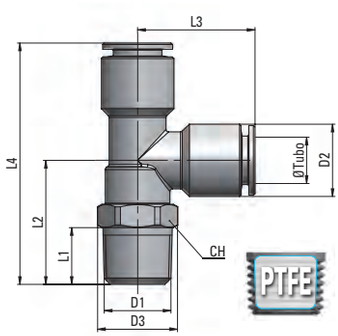
Girevole con anello doppio | Swivelling fitting with double banjo ring | Raccord tournant avec banjo double | Drehbare Verschraubung mit zweifachem Ringstück



Type	Ø Tubo	D1	D2	D3	L1	L2	L3	L4	CH	g
22 04 M5	4	M5x0,8	9	10	4	11	38	19,1	3	13,8
22 04 18	4	G1/8	9	14	5	15	41	25,5	4	27,4
22 06 M5	6	M5x0,8	12	10	4	11	43	19,1	3	19,9
22 06 18	6	G1/8	12	14	5	15	45	25,5	4	32,1
22 06 14	6	G1/4	12	18	6,5	17,5	48	29	5	45,8
22 08 18	8	G1/8	14	14	5	15	47	25,5	4	34,1
22 08 14	8	G1/4	14	18	6,5	17,5	49	29	5	46,5
22 10 14	10	G1/4	16	18	6,5	17,5	54	29	5	55,2
22 10 38	10	G3/8	16	22	7	19,5	58	32,5	6	72,4
22 12 38	12	G3/8	19	22	7	19,5	59	32,5	6	79
22 12 12	12	G1/2	19	27	8,5	24	63	39,6	8	124,7

MA 23

T laterale maschio conico girevole | Lateral run tee fitting, taper | Raccord à té latéral conique, tournant | T-Schwenkverschraubung, kegelig



Type	Ø Tubo	D1	D2	D3	L1	L2	L3	L4	CH	g
23 04 18	4	R1/8	9,1	14,5	7,5	20,2	19,5	39,7	13	22
23 04 14	4	R1/4	9,1	15,5	11	24,2	19,5	43,7	14	25,5
23 06 18	6	R1/8	12	14,5	7,5	20,2	22	42,2	13	27,5
23 06 14	6	R1/4	12	15,5	11	24,2	22	46,2	14	31
23 08 18	8	R1/8	14	14,5	7,5	20	22,5	42,5	13	31
23 08 14	8	R1/4	14	15,5	11	24	22,5	46,5	14	35
23 10 14	10	R1/4	16	20	11	26,5	26	52,5	18	50
23 10 38	10	R3/8	16	20	11,5	27	26	53	18	51
23 12 38	12	R3/8	19	22,5	11,5	30,5	28,5	59	20	75
23 12 12	12	R1/2	19	24,5	14	33,5	28,5	62	22	83,5

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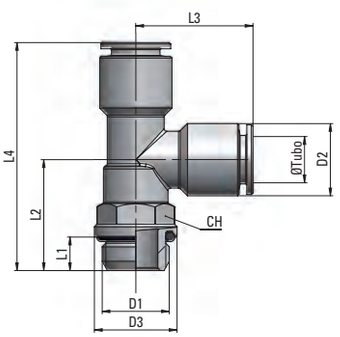
MA 24

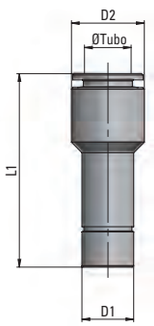
T laterale maschio cilindrico girevole | Lateral run tee fitting, parallel | Raccord à té latéral cylindrique, tournant | T-Schwenkverschraubung, zylindrisch



Type	Ø Tubo	D1	D2	D3	L1	L2	L3	L4	CH	g
24 04 18	4	G1/8	9,1	14,5	5	18,2	19,5	37,7	13	20,5
24 04 14	4	G1/4	9,1	16	6,5	21,7	19,5	41,2	13	24
24 06 18	6	G1/8	12	14,5	5	18,2	22	40,2	13	26
24 06 14	6	G1/4	12	16	6,5	21,7	22	43,7	13	29,5
24 08 18	8	G1/8	14	14,5	5	18	22,5	40,5	13	30
24 08 14	8	G1/4	14	16	6,5	21,5	22,5	44	13	33,5
24 10 14	10	G1/4	16	18	6,5	22	26	48	16	44
24 10 38	10	G3/8	16	20	7	25,5	26	51,5	16	49
24 12 38	12	G3/8	19	22,5	7	26	28,5	54,5	20	73
24 12 12	12	G1/2	19	25	8,5	30,5	28,5	59	20	77

MA 25

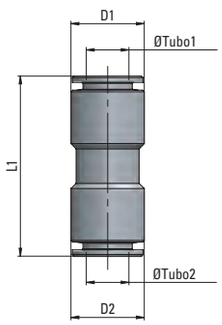
Riduzione | Reducer | Réduction | Reduzierstück



Type	Ø Tubo	D1	D2	L1	g
25 03 04	3	4	6,5	27,5	2,5
25 04 06	4	6	9	33,5	7
25 04 08	4	8	9	33,5	10
25 04 10	4	10	10	31,5	15
25 04 12	4	12	12	32,5	24,5
25 06 04	6	4	12	35,5	10
25 06 08	6	8	12	35	11,5
25 06 10	6	10	12	36,5	16,5
25 06 12	6	12	12	35,5	22,2
25 06 14	6	14	14	37,5	25
25 08 06	8	6	14	39,5	13,5
25 08 10	8	10	14	37	15
25 08 12	8	12	14	39	23
25 08 14	8	14	14	38,5	31,5
25 10 12	10	12	16	42	20
25 10 14	10	14	16	42	29,5
25 12 14	12	14	19	43	24
25 14 16	14	16	22	49,5	91,8

MA 26

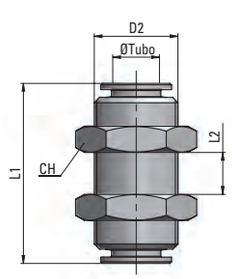
Giunzione intermedia | Union | Union simple égale | Gerade Verbindung



Type	Ø Tubo1	Ø Tubo2	D1	D2	L1	g
26 03 03	3	3	6,5	6,5	22,5	2,7
26 04 04	4	4	9	9	28	6,8
26 06 06	6	6	12	12	33,6	15
26 06 04	6	4	12	12	31	14,7
26 08 08	8	8	14	14	34	18
26 08 06	8	6	14	14	34	21
26 10 10	10	10	16	16	38,6	22,5
26 10 08	10	8	16	16	36,5	25,2
26 12 12	12	12	19	19	41	37
new 26 12 08	12	8	19	14	39	-
new 26 12 10	12	10	19	16	40,5	-
26 14 14	14	14	22	22	47	47,4
new 26 14 12	14	12	22	19	44,5	-
26 16 16	16	16	24	24	47	63,2
new 26 16 12	16	12	24	19	44,5	-
new 26 16 14	16	14	24	22	47	-

MA 27

Giunzione intermedia passaparete | Bulkhead union | Union traversée de cloison | Gerade Schottverschraubung



Type	Ø Tubo	D2	L1	L2	CH	g
27 03 03	3	M8x0,75	22,5	9,5	12	14,5
27 04 04	4	M12x1	28	11	16	23,5
27 06 06	6	M14x1	34	16	18	33
27 08 08	8	M16x1	34	16	20	39,5
27 10 10	10	M18x1	39	19	22	51,5
27 12 12	12	M20x1	41	20	24	60

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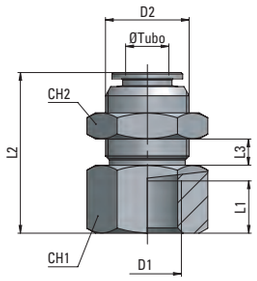
MA 27-F

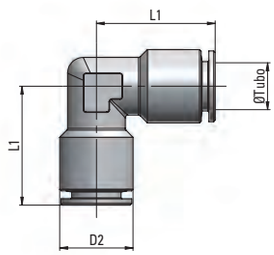
Giunzione intermedia passaparete, femmina | Bulkhead union, female | Union traversée de cloison, femelle | Gerade Schottverschraubung weiblich



	Type	Ø Tubo	D1	D2	L1	L2	L3	CH1	CH2	g
new	27 06 18 -F	6	G1/8	M14x1	7	26,5	9	18	18	-
new	27 06 14 -F	6	G1/4	M14x1	10	30,5	9	18	18	-
new	27 08 18 -F	8	G1/8	M16x1	7	26,5	9	20	20	-
new	27 08 14 -F	8	G1/4	M16x1	10	30,5	9	20	20	-
new	27 10 38 -F	10	G3/8	M18x1	11	33	10	22	22	-

MA 28

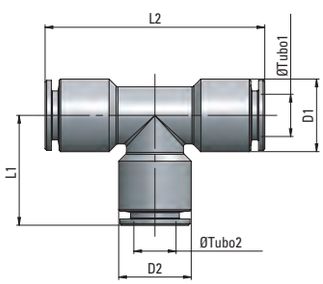
Gomito intermedio | Union elbow | Raccord à coude | Winkelverschraubung



Type	Ø Tubo	D2	L1	g
28 03 03	3	7	12,8	4,5
28 04 04	4	9	17,5	9
28 06 06	6	12	20,5	16,5
28 08 08	8	14	22,5	22
28 10 10	10	16	25	29,5
28 12 12	12	19	26,5	48,5
28 14 14	14	22	31,5	58
28 16 16	16	24	36,5	90,6

MA 29

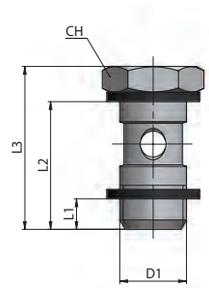
T intermedio | Union tee | T égal | T-Verschraubung



	Type	Ø Tubo1	Ø Tubo2	D1	D2	L1	L2	g
	29 03 03	3	3	7	7	12,8	25,6	5,6
	29 04 04	4	4	9	9	17,5	35	12,5
	29 06 06	6	6	12	12	20	40	22,5
new	29 06 04	6	4	12	9	18	40	-
	29 08 08	8	8	14	14	21	42	28
new	29 08 06	8	6	14	12	20,5	42	-
	29 10 10	10	10	16	16	24,5	49	39,2
new	29 10 08	10	8	16	14	23	49	-
	29 12 12	12	12	19	19	26	52	61,3
new	29 12 10	12	10	19	16	26	52	-
	29 14 14	14	14	22	22	30,5	61	77,1
	29 16 16	16	16	24	24	34,5	69	124

MA 31

Asta singola | Simple screw | Vis simple | Hohlschraube



Type	D1	L1	L2	L3	CH	g
31 00 M5	M5x0,8	4,1	14,3	18,5	8	2,5
31 00 18	G1/8	4,4	21,2	27	14	13,4
31 00 14	G1/4	5,9	24,7	31,5	17	27,8
31 00 38	G3/8	6,4	28,2	36	20	43
31 00 12	G1/2	7,5	33,5	41,5	26	80,5

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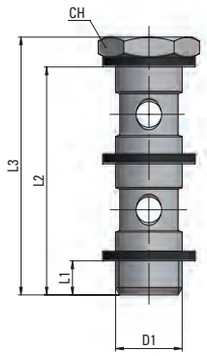
MA 32

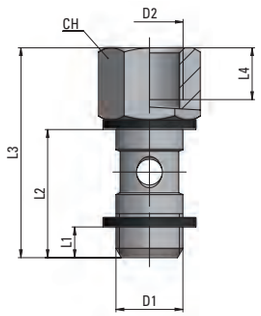
Asta doppia | Double screw | Vis double | Zweifache Hohlschraube



Type	D1	L1	L2	L3	CH	g
32 00 18	G1/8	4,1	37,7	43,5	14	19,5
32 00 14	G1/4	5,6	43,2	50	17	38,5
32 00 38	G3/8	6,1	49,7	57,5	20	63,5
32 00 12	G1/2	7	59	67	26	117

MA 33

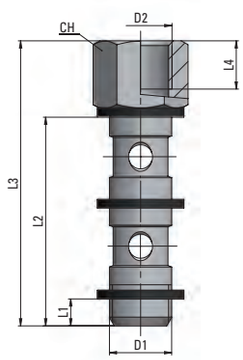
Asta singola maschio-femmina | Screw, male female | Vis mâle, femelle | Ein-Aufschraubhohlschraube



Type	D1	D2	L1	L2	L3	L4	CH	g
33 00 18	G1/8	G1/8	4,4	21,2	35	6,2	14	19,5
33 00 14	G1/4	G1/4	5,9	24,7	40,5	10	17	32,5
33 00 38	G3/8	G3/8	6,4	28,2	45	10	20	47

MA 34

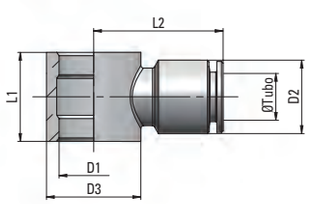
Asta doppia maschio-femmina | Double screw, male female | Vis double, mâle, femelle | Ein-Aufschraubhohlschraube, zweifach



Type	D1	D2	L1	L2	L3	L4	CH	g
34 00 18	G1/8	G1/8	4,1	37,7	51,5	6,2	14	26
34 00 14	G1/4	G1/4	5,6	43,2	59	10	17	44
34 00 38	G3/8	G3/8	6,1	49,7	66,5	10	20	66

MA 35

Anello singolo | Single banjo ring | Banjo simple | Ringstück



Type	Ø Tubo	D1	D2	D3	L1	L2	g
35 04 M5	4	M5	9,1	10	9	18,5	7,7
35 04 M5 /R	4	7	9,1	10	10	18,5	6,6
35 04 18	4	1/8	9,1	14	15	20,5	13,5
35 06 M5	6	M5	12	10	9	21,5	10,9
35 06 M5 /R	6	7	12	10	10	21,5	10,1
35 06 18	6	1/8	12	14	15	22,5	15,5
35 06 14	6	1/4	12	18	17	24	21,6
35 08 18	8	1/8	14	14	15	23,5	16,7
35 08 14	8	1/4	14	18	17	24,5	22,8
35 08 38	8	3/8	14	22	20	26,5	32,7
35 10 14	10	1/4	16	18	17	27	27,2
35 10 38	10	3/8	16	22	20	29	34,5
35 12 38	12	3/8	19	22	20	29,5	38,8
35 12 12	12	1/2	19	26	24	31,5	56,9

/R = Solo per regolatori di flusso - For flow controls only - Seulement pour les réducteurs de débit - Nur für Drosselrückschlagventil

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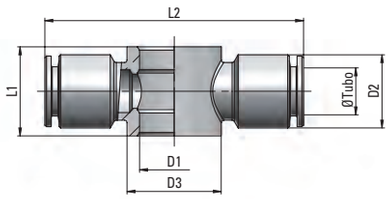
MA 36

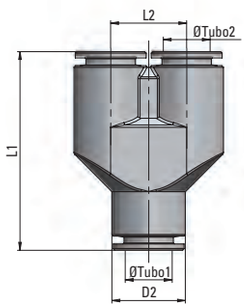
Anello doppio | Double banjo ring | Banjo double | Zweifaches Ringstück



Type	Ø Tubo	D1	D2	D3	L1	L2	g
36 04 M5	4	M5	9	10	9	37	10,9
36 04 18	4	1/8	9	14	15	41	18
36 06 18	6	1/8	12	14	15	45	23
36 06 14	6	1/4	12	18	17	48	28,7
36 08 18	8	1/8	14	14	15	47	25,3
36 08 14	8	1/4	14	18	17	49	29,7
36 08 38	8	3/8	14	22	20	53	42,5
36 10 14	10	1/4	16	18	17	54	37,9
36 10 38	10	3/8	16	22	20	58	44,5
36 12 38	12	3/8	19	22	20	59	51,3
36 12 12	12	1/2	19	27	24	63	67,2

MA 37

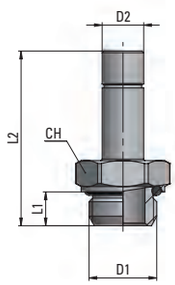
Y | Y fitting | Raccord à Y | Y-Verschraubung



Type	Ø Tubo1	Ø Tubo2	D2	L1	L2	g
new 37 03 03	3	4	6,8	25	7,5	8,2
37 04 04	4	4	9	29,5	9,5	14,3
37 06 06	6	6	12	36,5	12,5	32,7
37 06 04	6	4	12	34,1	11	36,1
37 08 08	8	8	14	37,5	14,5	44,1
37 08 06	8	6	14	37,5	14,5	51,1
37 10 10	10	10	16	44,5	16,5	62,7
37 10 08	10	8	16	44	16,5	74,9
37 12 12	12	12	19	49	19,5	95,8

MA 38

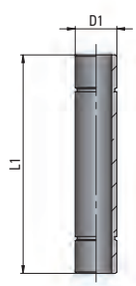
Attacco con filetto cilindrico | Stem adaptor | Branchement avec filetage cylindrique | Anschluß mit zylindrischem Gewinde



Type	D1	D2	L1	L2	CH	g
38 04 M5	M5x0,8	4	4	26	9	3,2
38 04 18	G1/8	4	5	28	13	7,3
38 04 14	G1/4	4	6,5	29,5	16	12,4
38 06 M5	M5x0,8	6	4	28	9	5,9
38 06 18	G1/8	6	5	30	13	8,5
38 06 14	G1/4	6	6,5	32,5	16	13,7
38 08 18	G1/8	8	5	31	13	9,4
38 08 14	G1/4	8	6,5	33,5	16	14,5
38 10 14	G1/4	10	6,5	34,5	16	15,5
38 10 38	G3/8	10	7	35	20	22
38 12 38	G3/8	12	7	38	20	23,6
38 12 12	G1/2	12	8,5	39,5	25	38

MA 39

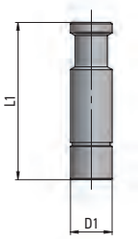
Prolunga | Extention piece | Douille de liaison | Verbindung



Type	D1	L1	g
39 04 04	4	35	2,7
39 06 06	6	40	5,1
39 08 08	8	42	8
39 10 10	10	50	11,8
39 12 12	12	53	15,3
39 14 14	14	54	18,8

MA 40

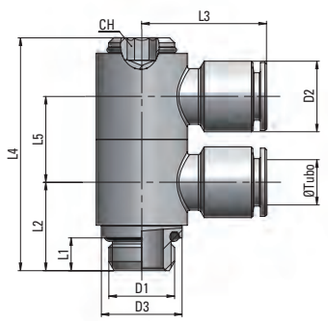
Tappo | Plug | Bouchon | Stopfen



Type	D1	L1	g
40 00 03	3	20	1
40 00 04	4	25	2,3
40 00 06	6	25	3,7
40 00 08	8	30	7,2
40 00 10	10	35	11,8
40 00 12	12	40	18,2
40 00 14	14	40	26,2
40 00 16	16	40	32,5

MA 41

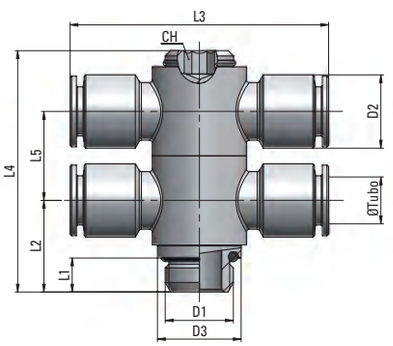
Girevole con doppio anello singolo | Swivelling fitting with two banjo rings | Raccord tournant avec deux banjos | Drehbare gerade Verschraubung mit zwei Ringstücken



Type	Ø Tubo	D1	D2	D3	L1	L2	L3	L4	L5	CH	g
41 04 M5	4	M5x0,8	9	10	4	11	18,5	29,2	10	3	18,5
41 04 18	4	G1/8	9,1	14	5	15	20,5	40,4	15	4	40
41 06 18	6	G1/8	12	14	5	15	22,5	40,4	15	4	46
41 06 14	6	G1/4	12	18	6,5	17,5	24	46,1	17	5	69,5
41 08 18	8	G1/8	14	14	5	15	23,5	40,4	15	4	50
41 08 14	8	G1/4	14	18	6,5	17,5	24,5	46,1	17	5	69,5

MA 42

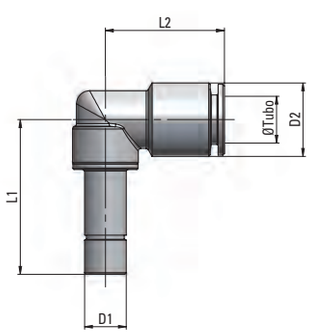
Girevole con duplice anello doppio | Swivelling fitting with two double banjo rings | Raccord tournant avec deux banjos doubles | Schwenkverschraubung mit zwei Zweifachringstücken



Type	Ø Tubo	D1	D2	D3	L1	L2	L3	L4	L5	CH	g
42 04 M5	4	M5x0,8	9	10	4	11	38	29,2	10	3	25
42 04 18	4	G1/8	9	14	5	15	41	40,4	15	4	50
42 06 18	6	G1/8	12	14	5	15	45	40,4	15	4	59
42 06 14	6	G1/4	12	18	6,5	17,5	48	46,1	17	5	82
42 08 18	8	G1/8	14	14	5	15	47	40,4	15	4	61
42 08 14	8	G1/4	14	18	6,5	17,5	49	46,1	17	5	83,5

MA 43

Gomito con codulo | Plug-in elbow | L à broche encliquetable | Winkelverschraubung mit Steckzapfen



Type	Ø Tubo	D1	D2	L1	L2	g
43 04 04	4	4	9,1	25,7	19,5	14
43 04 06	4	6	9,1	29,7	19,5	15
43 06 04	6	4	12	25,7	22	17
43 06 06	6	6	12	29,7	22	17
43 06 08	6	8	12	29,7	22	17,5
43 08 06	8	6	14	29,5	22,5	20,5
43 08 08	8	8	14	29,5	22,5	20,5
43 10 10	10	10	16	33,5	26	30

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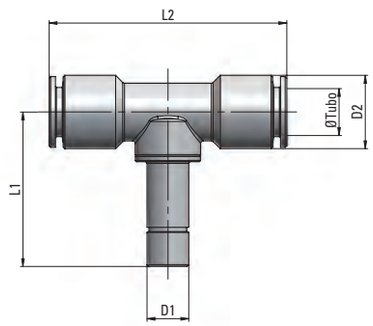
MA 44

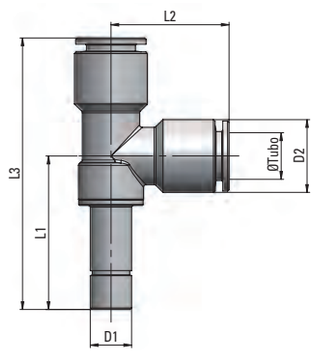
T centrale con codulo | Plug-in tee | T central à broche encliquetable | T-Verschraubung mit Steckzapfen



Type	Ø Tubo	D1	D2	L1	L2	g
44 04 04	**4**	**4**	9,1	25,7	39	18,5
44 04 06	**4**	**6**	9,1	29,7	39	19,5
44 06 06	**6**	**6**	12	29,5	44	24,5
44 06 08	**6**	**8**	12	29,5	44	24,5
44 08 08	**8**	**8**	14	29,5	45	29
44 08 10	**8**	**10**	14	33,5	46	38,5
44 10 10	**10**	**10**	16	33,5	52	41

MA 45

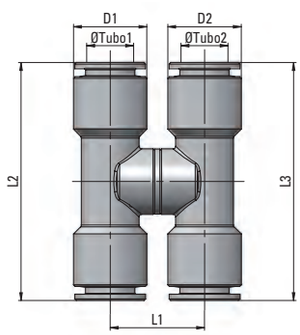
T laterale con codulo | Plug-in run tee | T latéral à broche encliquetable | T-Verschraubung mit Steckzapfen



Type	Ø Tubo	D1	D2	L1	L2	L3	g
45 04 04	**4**	**4**	9,1	25,7	19,5	45,2	18,5
45 04 06	**4**	**6**	9,1	29,7	19,5	49,2	20
45 06 06	**6**	**6**	12	29,7	22	51,7	25
45 06 08	**6**	**8**	12	29,7	22	51,7	25,5
45 08 08	**8**	**8**	14	29,5	22,5	52	30
45 10 10	**10**	**10**	16	33,5	26	59,5	41

MA 46

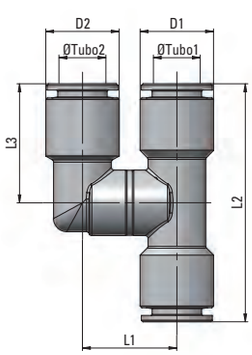
Croce intermedia girevole | Swivelling cross fitting | Croix tournante | Kreuzverschraubung, drehbar



Type	Ø Tubo1	Ø Tubo2	D1	D2	L1	L2	L3	g
46 04 04	**4**	**4**	9,1	9,1	18,4	39	39	31
46 04 06	**4**	**6**	9,1	12	18,4	39	44	36
46 06 06	**6**	**6**	12	12	18	44	44	41
46 06 08	**6**	**8**	12	14	18	44	45	46,5
46 08 08	**8**	**8**	14	14	18	45	45	50

MA 47

Y intermedio girevole | Swivelling Y fitting | Raccord Y tournant | Y-Verschraubung, drehbar



Type	Ø Tubo1	Ø Tubo2	D1	D2	L1	L2	L3	g
47 04 04	**4**	**4**	9,1	9,1	18,4	39	19,5	27
47 04 06	**4**	**6**	9,1	12	18,4	39	22	29,5
47 06 06	**6**	**6**	12	12	18,2	44	22	34,5
47 06 08	**6**	**8**	12	14	18	44	22,5	37,5
47 08 08	**8**	**8**	14	14	18	45	22,5	42

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MA 10

Cartuccia a pressare

La cartuccia MA10 grazie ad opportuni accorgimenti costruttivi può essere inserita senza alcun problema sia in corpi in plastica che in alluminio ed in ottone pertanto con un'unica versione è possibile far fronte a diverse necessità applicative.

Press-in cartridge

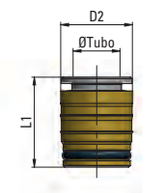
The new construction features of the cartridge MA10 allow for one single cartridge version to be assembled in plastic, aluminium as well as brass bodies.

Cartouche à presser

Grace à de nouvelles caractéristiques de construction, la cartouche MA10 peut être insérée dans des corps en aluminium, en laiton et en plastique.

Einsteckpatrone

Dank neuen Konstruktionseigenschaften ist die MA10 Einpresspatrone als einzelne Ausführung bei Kunststoff, Messing sowie Aluminiumgehäusen einsetzbar.



Type	Ø Tubo	D1	L1	g ⚖
10 04 00	**4**	9,3	14,5	3,6
10 06 00	**6**	11,5	16,5	5,7
10 08 00	**8**	13,7	17	7,9
10 10 00	**10**	15,8	19	10,3

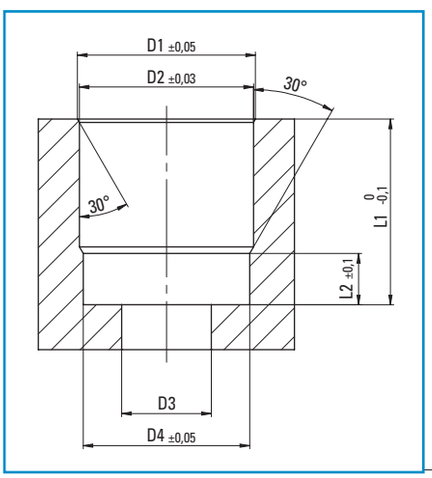
Schema di foratura

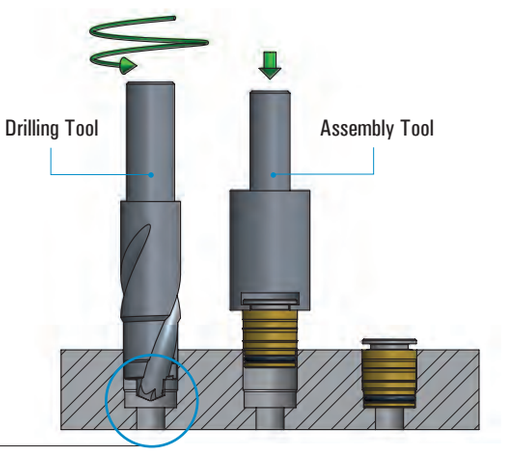
Cartridge seat drilling plan

Plan de forage des cartouches

Patronensitzbohrungskizze

Type	D1	D2	D3	D4	L1	L2
4	9,5	9,2	3	8,6	12	3,2
6	11,7	11,4	5	10,8	14	4
8	13,9	13,6	7	13	14,5	4
10	16	15,7	9	15,1	16	4





1 2

1 Realizzare la sede della cartuccia tramite foratura seguendo le indicazioni fornite

2 Pressare manualmente la cartuccia all'interno della sede realizzata fino ad andare in appoggio sul piano della sede con l'Assembly Tool; così facendo si avrà la certezza di aver effettuato l'inserimento.

"Drilling e Assembly Tool" fornibili su richiesta.

1 Drill the cartridge seat, following the instructions given

2 Manually press the cartridge into the seat and by means of the Assembly tool push it all the way down until it bottoms; this will guarantee the proper cartridge assembly.

Drilling and Assembly Tool "available upon request.

1 Réaliser le siège de la cartouche selon instructions données

2 Presser la cartouche à la main dans son siège et par l'outil de Montage presser la cartouche jusqu'au fond; comme ça on aura la garantie du montage correct.

"Outil à percer et pour le Montage" disponible sur demande.

1 Der Patronensitz gemäß Anweisungen bohren.

2 Die Patrone manuell in ihr Gehäuse einpressen und mit dem Einpresswerkzeug die Patrone bis zum Anschlag einpressen; damit wird die korrekte Patronenmontage garantiert.

"Bohren und Einpresswerkzeug" auf Anfrage verfügbar.

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MB LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi Automatici in Tecnopolimero
Technopolymer Push-in Fittings
Raccords Instantanés en Technopolymère
Steckverschraubungen aus Technopolymer

I

I Raccordi Automatici della serie MB sono realizzati in un tecnopolimero appartenente alla famiglia delle resine acetaliche (POM) conosciute per la loro stabilità dimensionale, rigidezza, resistenza alla fatica e alla corrosione, caratteristiche queste volte a coprire il gap esistente tra metallo e plastiche tradizionali.

GB

The push-in fittings of the MB line are made of a Technopolymer belonging to the Acetal Resins Family (POM) also well known for the dimensional stability offered, stiffness, fatigue and corrosion resistance. These features can bridge the gap between metal and the traditional plastic materials.

F

Les raccords de la série MB sont en tecno-polymère, produit de la famille des résines sionelle, rigidité, résistance à la fatigue et à la corrosion, caractéristiques qui couvrent l'écart entre le métal et les plastiques traditionnels.

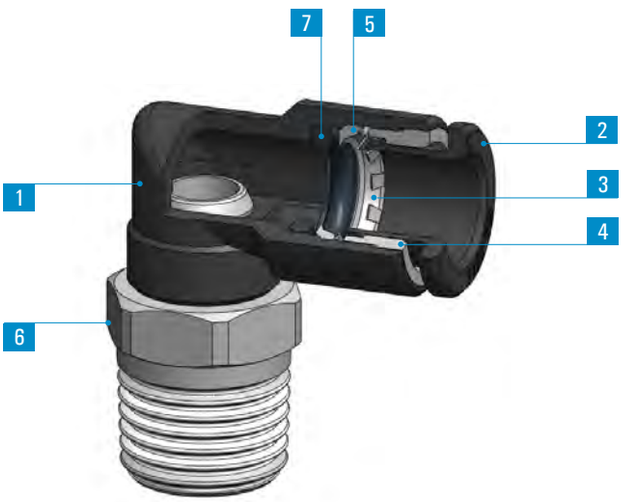
D

Die Steckverschraubung der MB Baureihe bestehen aus einem Technopolymer aus der Familie von Azetalharz, (POM) die für die Dimensionsstabilität, Steifheit, Erm üdungsfestigkeit und Korrosionsbeständigkeit bekannt ist.
Diese technische Eigenschaften ermöglichen den bestehenden Spalt zwischen Metall und den traditionellen Kunststoffmaterialien zu überbrücken.

MB

1 - 2	3	4	5	6	7
Corpo ed Anello Estrattore Body and Release Ring Corp et poussoir Körper und Lösering	Pinza aggraffaggio Gripping ring Pince Spannzange	Anello di Ritegno Holding Ring Bague de retenue Haltering	Anello portapinza Protection Ring Bague protection Schutzring	Viti Filettate Threaded Screws Filets Gewinde	Guarnizioni Seals Joint d'étancheité Dichtung
Resina Acetalica (POM) Acetal Resin (POM) Résine acétal (POM) Azetalharz (POM)	Acciaio Inox AISI 301 Stainless steel AISI 301 Acier Inox AISI 301 Edelstahl AISI 301	Resina Acetalica (POM) Acetal Resin (POM) Résine acétal (POM) Azetalharz (POM)	Resina Acetalica (POM) Acetal Resin (POM) Résine acétal (POM) Azetalharz (POM)	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel Plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt	NBR NBR NBR NBR

-20°C ÷ 70°C Max 18 bar -99 KPa



	M5x0,8	G1/8	G1/4	G3/8	G1/2	R1/8	R1/4	R3/8	R1/2
4	●	●	●			●	●		
6	●	●	●			●			
8		●	●	●		●	●	●	
10			●	●			●	●	
12				●	●			●	●
14				●	●			●	●

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Polietilene PE,
Poliuretano PU (98 Shore A).
Tolleranze accettabili sui tubi:
+/– 0,07 mm fino a Ø 10 mm
+/– 0,1 mm fino a Ø 14mm.

Campi di applicazione:
Impianti pneumatici.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyethylene PE,
Polyurethane PU (98 Shore A).
Acceptable Tolerances on the tubings: +/–
0,07 mm up to Ø 10 mm
+/– 0,1 mm up to Ø 14 mm.

Application fields:
Pneumatic circuits.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
PA11, PA12, PA6, Polyethylene PE,
Polyurethane PU (98 Shore A).
Tolerances sur les tubes:
+/– 0,07 mm jusqu'au Ø 10 mm
+/– 0,1 mm jusqu'au Ø 14 mm.

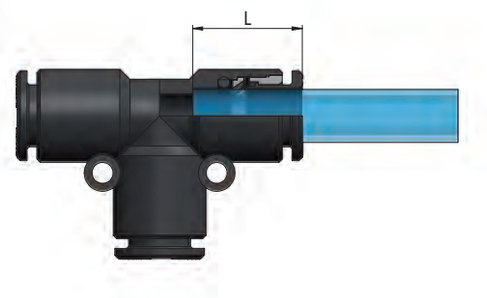
Domaines d'application:
Circuits pneumatiques.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyethylen PE,
Polyurethan PU (98 Shore A).
Schlauchtoleranzen:
+/– 0,07 mm bis Ø 10 mm
+/– 0,1 mm bis Ø 14 mm.

Anwendungsbereiche:
Pneumatik.

Profondità di inserimento del tubo | Tubing insertion depth | Profondeur d'insertion du tube | Schlaucheinstecktiefe



Øe Tube	L
4	13,4
6	16,3
8	16,5
10	18,5
12	20,3
14	23

ISTRUZIONI DI MONTAGGIO

1. Tagliare il tubo a 90° (servendosi della pinza tagliatubo TCUT) verificando l'assenza di bave interne ed esterne e facendo attenzione che il tubo non si presenti ovalizzato dopo il taglio.
2. Inserire il tubo nel raccordo spingendolo fino in battuta.

Estrazione del tubo
Esercitare una leggera pressione sull'anello estrattore, estraendo contemporaneamente il tubo dal corpo del raccordo.

ASSEMBLY INSTRUCTIONS

1. Cut the tube square (by means of a hose cutter i.e. our TCUT) making sure that no burrs are left and that the tube is not oval.
2. Insert the tube into the fitting until it bottoms.

Tube release
While pressing on the release ring, pull out the tube from the fitting.

INSTRUCTIONS DE MONTAGE

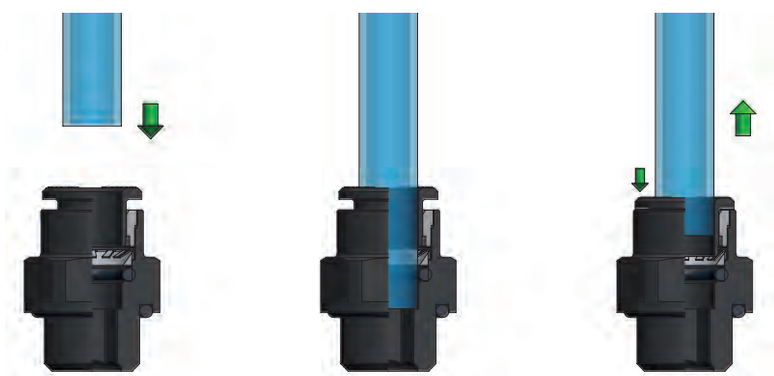
1. Sectionner le tube à 90° par notre coupe tube TCUT en prenant soin de ne par créer des bavures et de ne pas ovaliser le tube.
2. Pousser le tube jusqu' au fond du raccord.

Débranchement du tube
Appuyer sur le poussoir en métal et tirer simultanément sur le tube.

MONTAGEANWEISUNGEN

1. Schlauch mittels unserer Schlauchschere (TCUT) 90° abschneiden und entgraten.
2. Darauf achten, daß der Schlauch danach nicht oval gequetscht ist und dann ihn bis zum Verschraubungsanschlag einstecken.

Schlauchlösen
Auf den Druckring drücken und gleichzeitig den Schlauch rausziehen.



Effettuato il collegamento, assicurarsi che il tubo inserito nel raccordo non sia sottoposto ad alcuna forza di trazione; è necessario inoltre rispettare durante il collegamento del tubo il raggio minimo di curvatura consigliato così come riportato nella sezione tubi di questo catalogo tecnico (vedi pag. 363)
Al fine di evitare lo sgancio involontario del tubo nessun oggetto deve venire a contatto con l'anello estrattore del raccordo evitando così l'esercizio di qualsiasi forza indesiderata, anche solo laterale, che potrebbe causare la pressione dell'anello estrattore e conseguente rilascio del tubo.
Per il serraggio delle parti filettate del raccordo si raccomanda di attenersi alle coppie consigliate riportate a pag.6

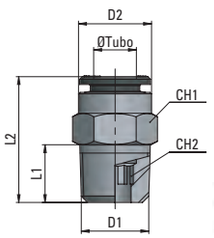
Once the tubing is connected to the fitting, make sure that the tubing is not subject to any tensile strength and that the min. recommended bending radius stated in the tubing section of this catalogue is complied with (see page 363).
To prevent any accidental tube release, no components have to come in touch with the release ring and exercise any unwanted pressure on the same. Indeed however lateral, any load on the release ring may cause the tube disconnection.
To tighten threads, please check out our tightening torque chart illustrated at page 6.

Une fois effectué le branchement, s'assurer que le tube inséré dans le raccord n'est soumis à aucune force de traction. Egalement, il est nécessaire de respecter, lors du branchement du tube, le rayon minimum de courbure conseillé dans la section tubes de ce catalogue technique (voir la page 363).
Afin d'éviter le décrochage involontaire du tube, aucun objet ne doit entrer en contact avec la bague d'extraction du raccord, empêchant ainsi l'exercice de toute force indésirable, ne serait-ce que latérale, qui pourrait provoquer la pression de la bague d'extraction et donc le relâchement du tube.
Pour le serrage des parties filetées du raccord, il est recommandé de s'en tenir aux couples de serrage conseillés et reportés à la page 6.

Nach der Schlauchverbindung, sicherstellen, dass der in die Verschraubung eingeführte Schlauch keinen Zugbelastungen ausgesetzt ist; beim Anschluss des Schlauchs muss der empfohlene Mindestbiegeradius eingehalten werden, gemäß den in diesem technischen Katalog im Schlauchabschnitt, angegebenen Hinweisen (siehe Seite 363).
Um das versehentliche Lösen des Schlauchs zu verhindern, darf kein Gegenstand den Lösering der Verschraubung berühren. Keine unerwünschte Kraft darf auch nicht seitlich einwirken und kein Druck soll auf den Lösering ausgeübt werden, denn dies das Schlauchlösen verursachen könnte.
Zum Festziehen der Gewinde sich an den, auf Seite 6, empfohlenen Drehmomente einhalten.

AP 11

Diritto maschio conico | Straight, male | Union simple mâle conique | Gerade Einschraubverschraubung, kegelig

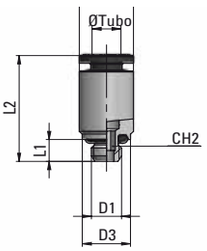


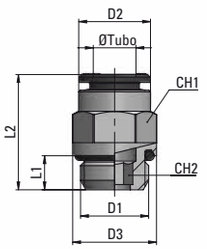
PTFE

Type	Ø Tubo	D1	D2	L1	L2	CH1	CH2	g
new 1 04 18	4	R1/8	9	7,5	16	10	3	-
new 1 04 14	4	R1/4	9	11	20,5	14	3	-
new 1 06 18	6	R1/8	11,9	7,5	21,5	12	4	-
new 1 06 14	6	R1/4	11,9	11	21	14	4	-
new 1 06 38	6	R3/8	11,9	11,5	21,5	17	4	-
new 1 08 18	8	R1/8	13,9	7,5	25,5	14	6	-
new 1 08 14	8	R1/4	13,9	11	24	14	6	-
new 1 08 38	8	R3/8	13,9	11,5	23	17	6	-
new 1 08 12	8	R1/2	13,9	14	25,5	22	6	-
new 1 10 18	10	R1/8	15,9	7.5	28	16	6	-
new 1 10 14	10	R1/4	15,9	11	30,5	16	8	-
new 1 10 38	10	R3/8	15,9	11,5	24	17	8	-
new 1 10 12	10	R1/2	15,9	14	27	22	8	-
new 1 12 14	12	R1/4	18,9	11	32,5	19	8	-
new 1 12 38	12	R3/8	18,9	11,5	28	19	10	-
new 1 12 12	12	R1/2	18,9	14	28	22	10	42,3

AP 12

Diritto maschio cilindrico | Parallel straight, male | Union simple mâle cylindrique | Gerade Einschraubverschraubung, zylindrisch



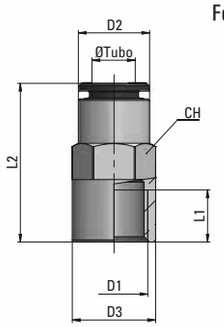


Type	Ø Tubo	D1	D2	D3	L1	L2	CH1	CH2	g
12 04 M5	4	M5x0,8	9	8	4	19	-	2,5	3,5
12 06 M5	6	M5x0,8	12	8	4	22,7	-	2,5	7,2
12 06 M12x1,5	6	M12x1,5	11,9	15	6,5	21,5	12	4	11,4

Type	Ø Tubo	D1	D2	D3	L1	L2	CH1	CH2	g
12 04 18	4	G1/8	9	13	5	16,5	9	3	5,3
12 06 18	6	G1/8	11,9	13,5	5	20	12	4	7,6
new 12 06 14	6	G1/4	11,9	16	6,5	20	12	4	11,5
new 12 06 38	6	G3/8	11,9	20	7	21	12	4	-
12 06 12	6	G1/2	11,9	25	8,5	23	12	4	-
12 08 18	8	G1/8	13,9	14,5	5	24	13	6	9,8
12 08 14	8	G1/4	13,9	16	6,5	22	14	6	12,1
12 08 38	8	G3/8	13,9	20	7	21,5	14	6	18,4
new 12 08 12	8	G1/2	13,9	25	8,5	23,5	14	6	32,8
12 10 18	10	G1/8	15,9	13	5	27	15	8	-
12 10 14	10	G1/4	15,9	16,5	6,5	27,5	15	8	15
12 10 38	10	G3/8	15,9	20	7	25	16	8	19,8
12 10 12	10	G1/2	15,9	25	8,5	25,5	16	8	32,5
12 12 14	12	G1/4	18,9	21	6,5	29	19	8	23
12 12 38	12	G3/8	18,9	21	7	29	19	10	25,7
12 12 12	12	G1/2	18,9	25	8,5	27	19	10	33,3

AP 13

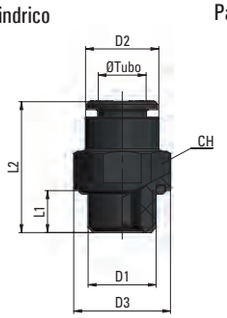
Diritto femmina | Female straight | Union simple femelle | Gerade Aufschraubverschraubung



Type	Ø Tubo	D1	D2	D3	L1	L2	CH	g
13 04 18	4	G1/8	9	13	7	23,5	9	9
13 06 18	6	G1/8	11,9	14	7	26,5	12	14,1
13 06 14	6	G1/4	11,9	16	10	30,5	12	17,2
13 08 18	8	G1/8	13,7	16,2	7	26,5	14	16,5
13 08 14	8	G1/4	13,9	16	10	30,5	14	18,5
13 10 14	10	G1/4	15,9	18,5	10	32	16	22
13 10 38	10	G3/8	15,9	20	11	33,5	16	27,8

MB 12

Diritto maschio cilindrico | Parallel straight, male | Union simple male cylindrique | Gerade Einschraubverschraubung, zylindrisch



Type	Ø Tubo	D1	D2	D3	L1	L2	CH	g
12 04 18	4	G1/8	10	15,5	6	20,5	14	2,3
12 06 18	6	G1/8	12	15,5	6	23,5	14	2,7
12 06 14	6	G1/4	12	18,5	8	25,5	17	4,1
12 08 18	8	G1/8	14	15,5	6	25	14	2,9
12 08 14	8	G1/4	14	18,5	8	24,5	17	3,8
12 08 38	8	G3/8	14	23,5	9	26,5	21	5,9
12 10 14	10	G1/4	16	18,5	8	27,5	17	4
12 10 38	10	G3/8	16	23,5	9	27,5	21	6,2

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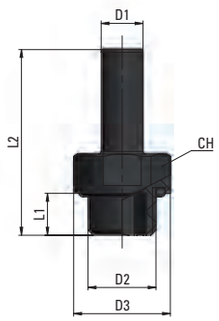
MB 13

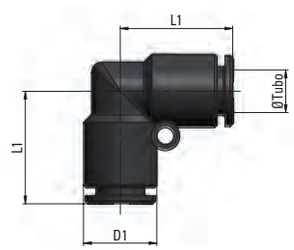
Attacco con filetto cilindrico | Stem adaptor | Branchement avec filetage cylindrique | Anschluß mit zylindrischem Gewinde



Type	D1	D2	D3	L1	L2	CH	g
13 04 18	4	G1/8	15,5	6	27	14	1,9
13 06 18	6	G1/8	15,5	6	30	14	2
13 06 14	6	G1/4	18,5	8	33,5	17	3,2
13 08 18	8	G1/8	15,5	6	32	14	2,1
13 08 14	8	G1/4	18,5	8	35,5	17	3,5
13 08 38	8	G3/8	23,5	9	37	21	5,4
13 10 14	10	G1/4	18,5	8	37,5	17	3,5
13 10 38	10	G3/8	23,5	9	39	21	5,5

MB 14

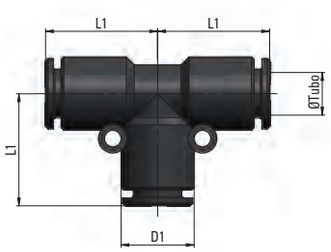
Gomito intermedio | Union elbow | Raccord à coude | Winkelverschraubung



Type	Ø Tubo	D1	L1	g
14 04 04	4	10	15,5	2,2
14 06 06	6	12	19,7	3,8
14 08 08	8	14	21,5	4,9
14 10 10	10	16	23,5	6,3
14 12 12	12	19	27	9,6
14 14 14	14	22,5	30,5	15,5

MB 15

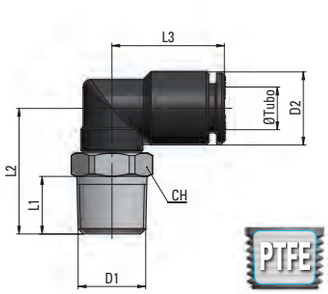
T intermedio | Union tee | T égal | T-Verschraubung



Type	Ø Tubo	D1	L1	g
15 04 04	4	10	15,2	3,3
15 06 06	6	12	19,7	5,4
15 08 08	8	14	21,5	7,1
15 10 10	10	16	23,5	8,8
15 12 12	12	19	27	13,8
15 14 14	14	22,5	30,5	21,7

MB 16

Gomito maschio conico girevole | Taper swivelling elbow fitting, male | Raccord à coude tournant, mâle conique | Schwenkbare Winkelverschraubung, kegelig



Type	Ø Tubo	D1	D2	L1	L2	L3	CH	g
16 04 18	4	R1/8	10	7,5	17	15,5	10	6,4
16 04 14	4	R1/4	10	11	20,5	15,5	14	11,5
16 06 18	6	R1/8	12	7,5	18,8	20	12	8,4
16 06 14	6	R1/4	12	11	23,3	20	14	13,6
16 08 18	8	R1/8	14	7,5	19,5	21,5	12	9
16 08 14	8	R1/4	14	11	24	21,5	14	14,1
16 08 38	8	R3/8	14	11,5	24,5	21,5	17	19
16 10 14	10	R1/4	16	11	25,5	24	16	17,3
16 10 38	10	R3/8	16	11,5	26,5	24	17	21,7
16 12 38	12	R3/8	19	11,5	28,5	28,5	20	32,8
16 12 12	12	R1/2	19	14	31,5	28,5	22	41,4
16 14 38	14	R3/8	22,5	11,5	29,5	32,3	20	34,6
16 14 12	14	R1/2	22,5	14	32,5	32,3	22	43,2

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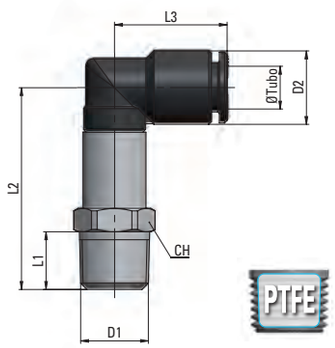
MB 17

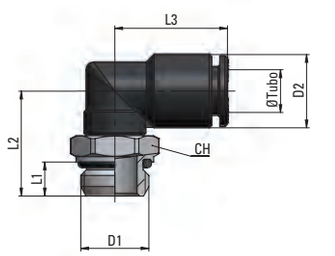
Gomito maschio conico girevole prolungato | Extended swivel elbow, taper | Raccord à coude long, mâle tournant conique | Verlängerte Winkelschwenkverschraubung, kegelig



Type	Ø Tubo	D1	D2	L1	L2	L3	CH	g
17 04 18	4	R1/8	10	7,5	26	15,5	10	10
17 04 14	4	R1/4	10	11	30	15,5	14	16,1
17 06 18	6	R1/8	12	7,5	33,3	20	12	17,6
17 06 14	6	R1/4	12	11	37,8	20	14	20,5
17 08 18	8	R1/8	14	7,5	34	21,5	12	18
17 08 14	8	R1/4	14	11	38,5	21,5	14	20,8
17 08 38	8	R3/8	14	11,5	39	21,5	17	27,4
17 10 14	10	R1/4	16	11	41,9	24	16	36,4
17 10 38	10	R3/8	16	11,5	42,9	24	17	35,1

MB 18

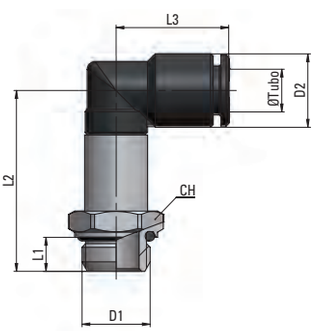
Gomito maschio cilindrico girevole | Parallel swivelling elbow, male | Raccord à coude tournant, mâle cylindrique | Schwenkbare Winkelverschraubung, zylindrisch



Type	Ø Tubo	D1	D2	L1	L2	L3	CH	g
18 04 M5	4	M5x0,8	10	4	14,8	15,5	9	4,6
18 04 18	4	G1/8	10	5	15	15,5	13	7,1
18 04 14	4	G1/4	10	6,5	17	15,5	16	11,1
18 06 M5	6	M5x0,8	12	4	15,3	20	12	7,9
18 06 18	6	G1/8	12	5	17,3	20	12	8,4
18 06 14	6	G1/4	12	6,5	19,3	20	15	12,5
18 08 18	8	G1/8	14	5	18	21,5	12	8,8
18 08 14	8	G1/4	14	6,5	20	21,5	15	13
18 08 38	8	G3/8	14	7	21,5	21,5	20	21,4
18 10 14	10	G1/4	16	6,5	21,5	24	16	15,6
18 10 38	10	G3/8	16	6,5	23,5	24	20	22,8
18 12 38	12	G3/8	19	7	24	28,5	20	27,2
18 12 12	12	G1/2	19	8,5	28,5	28,5	20	34,9
18 14 38	14	G3/8	22,5	7	25	32,3	20	28,8
18 14 12	14	G1/2	22,5	8,5	29,5	32,3	20	36,5

MB 19

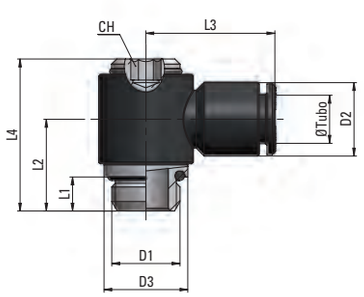
Gomito maschio cilindrico girevole prolungato | Swivelling extended elbow fitting, male, parallel | Coude long tournant, mâle cylindrique | Verlängerte Winkelverschraubung, drehbar und zylindrisch



Type	Ø Tubo	D1	D2	L1	L2	L3	CH	g
19 04 M5	4	M5x0,8	10	4	23,8	15,5	9	9,1
19 04 18	4	G1/8	10	5	24	15,5	13	10,2
19 04 14	4	G1/4	10	6,5	26	15,5	16	13,7
19 06 M5	6	M5x0,8	12	4	29,8	20	12	20,8
19 06 18	6	G1/8	12	5	31,8	20	13	19,6
19 06 14	6	G1/4	12	6,5	33,8	20	16	20,5
19 08 18	8	G1/8	14	5	32,5	21,5	13	20
19 08 14	8	G1/4	14	6,5	34,5	21,5	16	20,9
19 08 38	8	G3/8	14	7	36	21,5	20	29,4
19 10 14	10	G1/4	16	6,5	36,9	24	16	32,3
19 10 38	10	G3/8	16	7	38,9	24	20	36,8

MB 20

Girevole con anello singolo | Swivelling fitting with banjo ring | Raccord tournant avec banjo | Schwenkverschraubung mit Ringstück



Type	Ø Tubo	D1	D2	D3	L1	L2	L3	L4	CH	g
20 04 M5	4	M5x0,8	10	9	4	12	17,6	19,1	3	5,4
20 04 18	4	G1/8	9,7	13	5	15	19,1	25,5	4	12,2
20 06 M5	6	M5x0,8	12	9	4	12	19	21,5	3	5,9
20 06 18	6	G1/8	12	13	5	15	22,7	25,5	4	12,8
20 06 14	6	G1/4	12	16	6,5	17,5	24,3	29	5	21,8
20 08 18	8	G1/8	14	13	5	14,85	23	25,5	4	13
20 08 14	8	G1/4	14	16	6,5	17,5	29	24,6	5	22,2
20 08 38	8	G3/8	14	20	7	19,5	26,5	32,5	6	34,9
20 10 14	10	G1/4	16	16	6,5	17,5	29	27	5	22,5
20 10 38	10	G3/8	16	20	7	19,5	28,5	32,5	6	35,5

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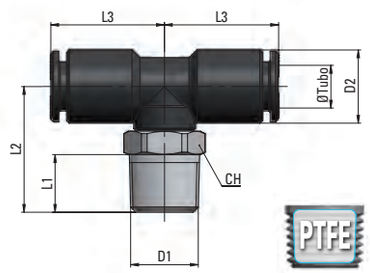
MB 21

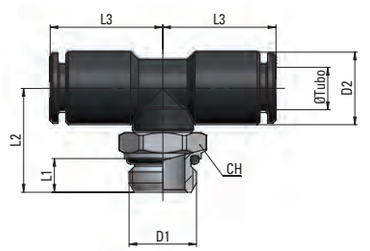
T centrale maschio conico girevole | Swivelling tee, taper | Raccord à té tournant, mâle conique | T-Verschraubung, schwenkbar und kegelig



Type	Ø Tubo	D1	D2	L1	L2	L3	CH	g
21 04 18	4	R1/8	10	7,5	17	15,7	10	7,4
21 04 14	4	R1/4	10	11	20,5	15,7	14	13,8
21 06 18	6	R1/8	12	7,5	18,8	20,2	12	10
21 06 14	6	R1/4	12	11	23,3	20,2	14	15,2
21 08 18	8	R1/8	14	7,5	19,5	21,7	12	11,2
21 08 14	8	R1/4	14	11	24	21,7	14	16,3
21 08 38	8	R3/8	14	11,5	24,5	21,7	17	21,3
21 10 14	10	R1/4	16	11	25,5	24	16	19,9
21 10 38	10	R3/8	16	11,5	26,5	24	17	27
21 12 38	12	R3/8	19	11,5	28,5	28,5	20	36,3
21 12 12	12	R1/2	19	14	31,5	28,5	22	44,8

MB 22

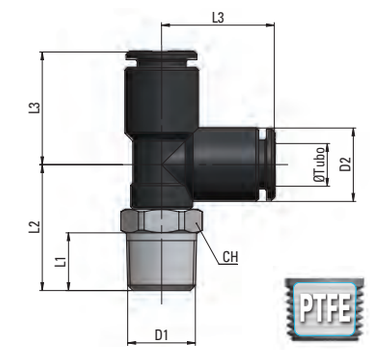
T centrale maschio cilindrico girevole | Swivelling tee fitting, parallel | Raccord à té tournant, mâle cylindrique | T-Verschraubung, schwenkbar und zylindrisch



Type	Ø Tubo	D1	D2	L1	L2	L3	CH	g
22 04 M5	4	M5x0,8	10	4	14,8	15,7	9	5,6
22 04 18	4	G1/8	10	5	15	15,7	13	8,1
22 04 14	4	G1/4	10	6,5	17	15,7	16	12
22 06 M5	6	M5x0,8	12	4	15,3	20,2	12	9,2
22 06 18	6	G1/8	12	5	17,3	20,2	12	9,8
22 06 14	6	G1/4	12	6,5	19,3	20,2	15	13,6
22 08 18	8	G1/8	14	5	18	21,7	12	11,1
22 08 14	8	G1/4	14	6,5	20	21,7	15	15,1
22 08 38	8	G3/8	14	7	21,5	21,7	20	23,7
22 10 14	10	G1/4	16	6,5	21,5	24	16	18
22 10 38	10	G3/8	16	7	23,5	24	20	25,2
22 12 38	12	G3/8	19	7	24	28,5	20	30,5
22 12 12	12	G1/2	19	8,5	28,5	28,5	20	38,1

MB 23

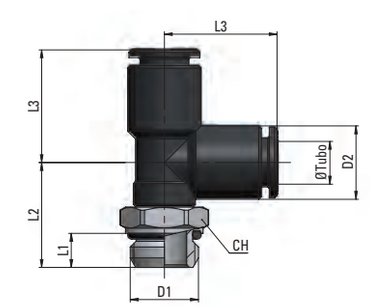
T laterale maschio conico girevole | Lateral run tee fitting, taper | Raccord à té latéral conique, tournant | T-Schwenkverschraubung, kegelig



Type	Ø Tubo	D1	D2	L1	L2	L3	CH	g
23 04 18	4	R1/8	10	7,5	17	15,5	10	7,4
23 04 14	4	R1/4	10	11	20,5	15,5	14	12,6
23 06 18	6	R1/8	12	7,5	18,8	20	12	10,1
23 06 14	6	R1/4	12	11	23,3	20	14	15,2
23 08 18	8	R1/8	14	7,5	19,5	21,5	12	10,9
23 08 14	8	R1/4	14	11	24	21,5	14	16,2
23 08 38	8	R3/8	14	11,5	24,5	21,5	17	23,7
23 10 14	10	R1/4	16	11	25,5	24	16	22,5
23 10 38	10	R3/8	16	11,5	26,5	24	17	26,7

MB 24

T laterale maschio cilindrico girevole | Lateral run tee fitting, parallel | Raccord à té latéral cylindrique, tournant | T-Schwenkverschraubung, zylindrisch



Type	Ø Tubo	D1	D2	L1	L2	L3	CH	g
24 04 M5	4	M5x0,8	10	4	14,8	15,5	9	5,6
24 04 18	4	G1/8	10	5	15	15,5	13	8,1
24 04 14	4	G1/4	10	6,5	17	15,5	16	13
24 06 M5	6	M5x0,8	12	4	15,3	20	12	10,3
24 06 18	6	G1/8	12	5	17,3	20	12	9,9
24 06 14	6	G1/4	12	6,5	19,3	20	15	13,9
24 08 18	8	G1/8	14	5	18	21,5	12	10,7
24 08 14	8	G1/4	14	6,5	20	21,5	15	14,7
24 08 38	8	G3/8	14	7	21,5	21,5	20	27,4
24 10 14	10	G1/4	16	6,5	21,5	24	16	20
24 10 38	10	G3/8	16	7	23,5	24	20	25,1

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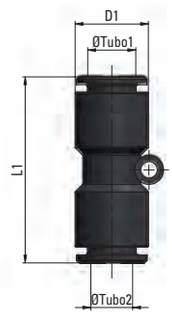
MB 25

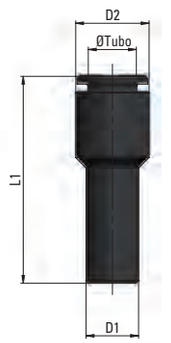
Giunzione intermedia | Union | Union simple égale | Gerade Verbindung



Type	Ø Tubo1	Ø Tubo2	D1	L1	g
25 04 04	4	4	10	26,5	2,2
25 06 06	6	6	12	34	3,4
25 08 08	8	8	14	35,5	4,3
25 10 10	10	10	16	37,5	5,5
25 12 12	12	12	19	42	7,6
25 06 04	6	4	12	31	2,8
25 08 06	8	6	14	35	4
25 10 08	10	8	16	36,5	7
25 12 08	12	8	19	41,5	9,5
25 12 10	12	10	19	41,5	8,6
25 14 14	14	14	22,5	48	13

MB 26

Riduzione | Reducer | Réduction | Reduzierstück



Type	Ø Tubo	D1	D2	L1	g
26 04 06	4	6	10	31,5	1,7
26 04 08	4	8	10	32,5	2
26 04 10	4	10	10	34,5	3
26 06 08	6	8	12	37	2,6
26 06 10	6	10	12	37	3,1
26 06 12	6	12	12	39	3,9
26 08 10	8	10	14	39,5	3,7
26 08 12	8	12	14	41,5	4,4
26 10 12	10	12	16	45	5,3
26 10 14	10	14	16	45	6,2
26 12 14	12	14	19	47	7,1

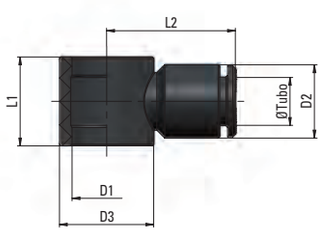
MB 27

Riduzione | Reducer | Réduction | Reduzierstück

Type	Ø Tubo	D1	D2	L1	g
27 06 04	6	4	12	34	2,1
27 08 06	8	6	14	36,5	2,9

MB 28

Anello singolo | Single banjo ring | Banjo simple | Ringstück



Type	Ø Tubo	D1	D2	D3	L1	L2	g
28 04 M5	4	M5	10	9,7	10	17,6	1,9
28 04 M5 /R	4	7	10	9,7	10	17,6	2,3
28 04 18	4	1/8	10	15	15	19,1	2,9
28 06 M5 /R	6	7	12	9,7	10	21,5	3,1
28 06 18	6	1/8	12	15	15	22,7	3,5
28 06 14	6	1/4	12	18	17	24,3	4,2
28 08 18	8	1/8	14	15	14,7	23	3,7
28 08 14	8	1/4	14	18	17	24,6	4,5
28 08 38	8	3/8	14	23	20	26,5	6,4
28 10 14	10	1/4	16	18	17	27	5,2
28 10 38	10	3/8	16	23	20	28,5	8,4

/R = Solo per regolatori di flusso - For flow controls only - Seulement pour les réducteurs de débit - Nur für Drosselrückschlagventil

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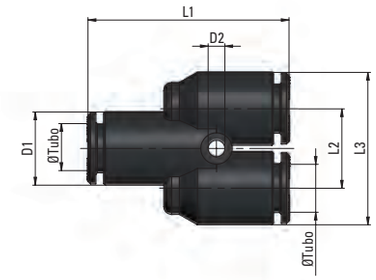
MB 29

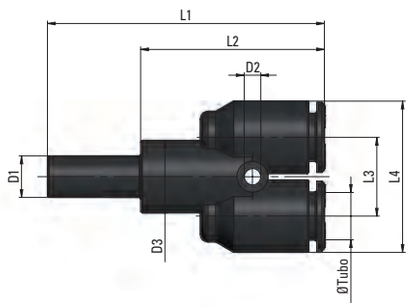
Y | Y fitting | Raccord à Y | Y-Verschraubung



Type	Ø Tubo	D1	D2	L1	L2	L3	g
29 04 04	4	9,5	2,7	28,3	10,7	20,2	3,5
29 06 06	6	11,5	3,2	35,9	13	24,5	5,7
29 08 08	8	14	3,2	38,5	15,2	29,2	7,9
29 10 10	10	16	3,2	40,6	17,5	33,5	9,7
29 12 12	12	19	3,2	45	20,5	39,5	15,5

MB 30

Y con codulo | Tube Y coupling | Raccord à Y avec douille | Y-Verschraubung mit Anschluß

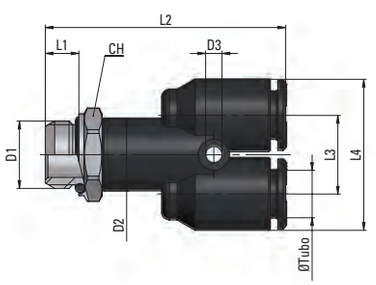


Type	Ø Tubo	D1	D2	D3	L1	L2	L3	L4	g
30 04 04	4	4	2,7	10	42,3	25,8	10,7	20,7	3,8
30 04 06	4	6	2,7	10	44,6	25,8	10,7	20,7	4,2
30 04 08	4	8	2,7	10	46,3	25,8	10,7	20,7	4,5
30 06 06	6	6	3,2	12	51,9	32,9	13,2	25,2	6,3
30 08 08	8	8	3,2	14	54,5	35,5	15,2	29,2	8,7

MB 31

Y-Verschraubung mit Gewinde

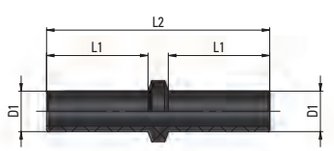
Y con attacco filettato cilindrico | Threaded Y fitting | Raccord à Y avec filetage



Type	Ø Tubo	D1	D2	D3	L1	L2	L3	L4	CH	g
31 04 M5	4	M5x0,8	10	2,7	4	33,8	10,7	20,5	9	6,5
31 04 18	4	G1/8	10	2,7	5	34,8	10,7	20,5	13	9
31 04 14	4	G1/4	10	2,7	6,5	36,8	10,7	20,5	16	13,4
31 06 18	6	G1/8	12	3,2	5	41,9	13,2	25,2	13	11,5
31 06 14	6	G1/4	12	3,2	6,5	43,9	13,2	25,2	16	16,2
31 08 18	8	G1/8	14	3,2	5	43	15,2	29,2	14	15,9
31 08 14	8	G1/4	14	3,2	6,5	46,5	15,2	29,2	16	18,8
31 08 38	8	G3/8	14	3,2	7	48,5	15,2	29,2	20	27,7

MB 32

Prolunga | Extention piece | Douille de liaison | Verbindung



Type	D1	L1	L2	g
32 04 00	4	15	33	0,6
32 06 00	6	18	40	1,3
32 08 00	8	20	44	1,8
32 10 00	10	22	48	3,1
32 12 00	12	25	54	4,2
32 14 00	14	25	54	4,8

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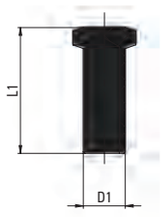
MB 33

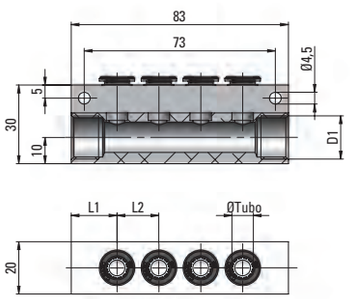
Tappo | Plug | Bouchon | Stopfen



Type	D1	L1	g
33 04 00	4	18	0,3
33 06 00	6	22	0,9
33 08 00	8	24	1,3
33 10 00	10	26	2
33 12 00	12	40	3,3
33 14 00	14	40	4,2

MB 35

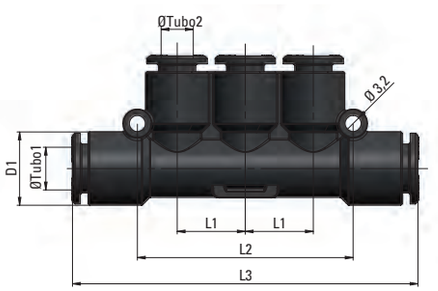
Ripartitore | Manifold | Distributeur | Verteiler



Type	Ø Tubo	D1	L1	L2	N°	g
35 04 06	4	G1/4	14	11	6	111,7
35 06 05	6	G1/4	15,5	13	5	104,1
35 08 04	8	G3/8	17,5	16	4	99,3

MB 36

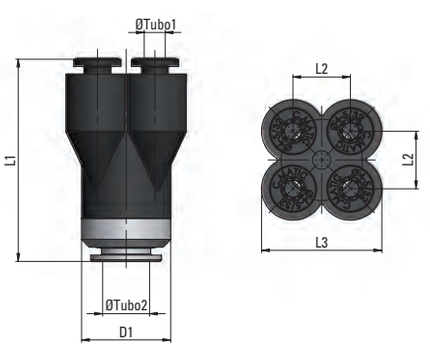
Ripartitore | Manifold | Distributeur | Verteiler



Type	Ø Tubo1	Ø Tubo2	D1	L1	L2	L3	g
36 06 04	6	4	12	11	35,2	59	8
36 08 06	8	6	14	13	41,2	66	11,2

MB 43

Doppia biforcazione intermedia | Double Y-coupling | Raccord égale à Y double | Zweifache Y Verschraubung



Type	Ø Tubo1	Ø Tubo2	D1	L1	L2	L3	g
43 04 06	4	6	17	38,5	11	23	27,8
43 04 08	4	8	17	38,5	11	23	25

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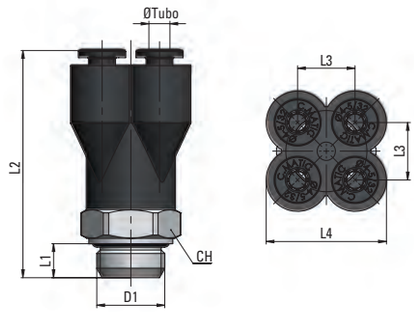
MB 44

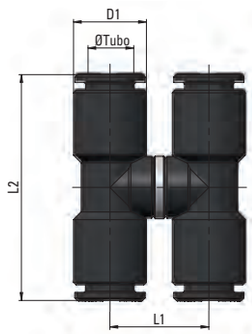
Doppia biforcazione con attacco filettato | Double Y-coupling with threaded joint fitting | Raccord à Y double avec filetage | Zweifache Y Verschraubung mit Gewinde



Type	Ø Tubo	D1	L1	L2	L3	L4	CH	g
44 04 18	**4**	**G1/8**	5	41	11	23	17	32,8
44 04 14	**4**	**G1/4**	6,5	43	11	23	17	32

MB 46

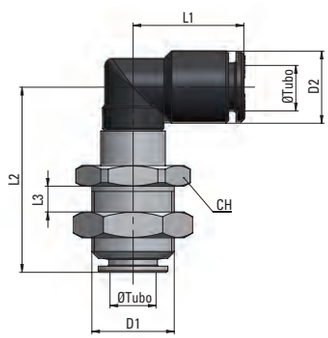
Croce intermedia girevole | Swivelling cross fitting | Croix tournante | Kreuzverschraubung, drehbar



Type	Ø Tubo	D1	L1	L2	g
46 04 04	**4**	10	14	31,4	9,2
46 06 06	**6**	12	17,6	40,4	11,9
46 08 08	**8**	14	19	43,4	14,1
46 10 10	**10**	16	23	48	25,8

MB 48

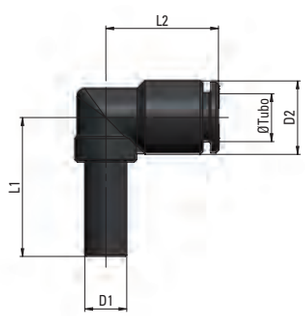
Gomito passaparete | Elbow bulkhead | Coude traversé de cloison | Winkelschottverschraubung



Type	Ø Tubo	D1	D2	L1	L2	L3	CH	g
48 04 04	**4**	M12x0,75	10	15,5	27,1	5,5	15	18
48 06 06	**6**	M14x1	12	20	33	5,7	18	32,8
48 08 08	**8**	M16x1	14	21,5	35,7	7,7	20	39,6
48 10 10	**10**	M18x1	16	24	40,3	9,2	22	52,8
48 12 12	**12**	M20x1	19	28,5	44,5	9,8	24	71,5

MB 49

Gomito con codulo | Plug-in elbow | L à broche encliquetable | Winkelverschraubung mit Steckzapfen



Type	Ø Tubo	D1	D2	L1	L2	g
49 04 04	**4**	**4**	10	21	15,5	1,8
49 06 06	**6**	**6**	12	25,5	20	3,2
49 08 08	**8**	**8**	14	28,8	21,5	3,8
49 10 10	**10**	**10**	16	32,4	24	6,7
49 12 12	**12**	**12**	19	36	28,5	9,5
49 14 14	**14**	**14**	22,5	36,9	32,3	11,5

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MB 10

Cartuccia a pressare

La cartuccia MB10 grazie ad opportuni accorgimenti costruttivi può essere inserita senza alcun problema sia in corpi in plastica che in alluminio ed in ottone pertanto con un'unica versione è possibile far fronte a diverse necessità applicative.

Press-in cartridge

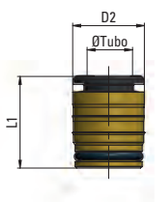
The new construction features of the cartridge MB10 allow for one single cartridge version to be assembled in plastic, aluminium as well as brass bodies.

Cartouche à presser

Grace à de nouvelles caractéristiques de construction, la cartouche MB10 peut être insérée dans des corps en aluminium, en laiton et en plastique.

Einsteckpatrone

Dank neuen Konstruktionseigenschaften ist die MB10 Einpresspatrone als einzelne Ausführung bei Kunststoff, Messing sowie Aluminiumgehäusen einsetzbar.



Type	Ø Tubo	D_1	L_1	g ⚖
10 04 00	4	9,3	14,5	2,8
10 06 00	6	11,5	17	4,6
10 08 00	8	13,7	17,5	6,4
10 10 00	10	15,8	19	8,3

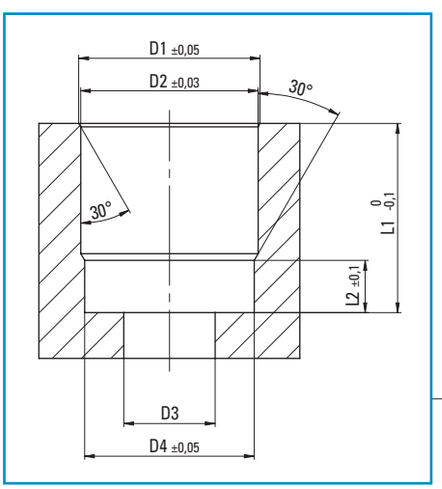
Schema di foratura

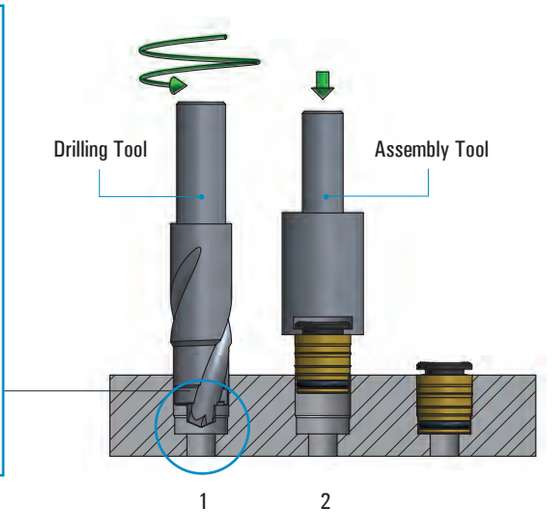
Cartridge seat drilling plan

Plan de forage des cartouches

Patronensitzbohrungskizze

Type	D_1	D_2	D_3	D_4	L_1	L_2
4	9,5	9,2	3	8,6	12	3,2
6	11,7	11,4	5	10,8	14	4
8	13,9	13,6	7	13	14,5	4
10	16	15,7	9	15,1	16	4





1 Realizzare la sede della cartuccia tramite foratura seguendo le indicazioni fornite

2 Pressare manualmente la cartuccia all'interno della sede realizzata fino ad andare in appoggio sul piano della sede con l'Assembly Tool; così facendo si avrà la certezza di aver effettuato l'inserimento.

"Drilling e Assembly Tool" fornibili su richiesta.

1 Drill the cartridge seat, following the instructions given

2 Manually press the cartridge into the seat and by means of the Assembly tool push it all the way down until it bottoms; this will guarantee the proper cartridge assembly.

"Drilling and Assembly Tool "available upon request.

1 Réaliser le siège de la cartouche selon instructions données

2 Presser la cartouche à la main dans son siège et par l'outil de Montage presser la cartouche jusqu'au fond; comme ça on aura la garantie du montage correct.

"Outil à percer et pour le Montage" disponible sur demande.

1 Der Patronensitz gemäß Anweisungen bohren.

2 Die Patrone manuell in ihr Gehäuse einpressen und mit dem Einpresswerkzeug die Patrone bis zum Anschlag einpressen; damit wird die korrekte Patronenmontage garantiert.

"Bohren und Einpresswerkzeug" auf Anfrage verfügbar.

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AP LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi Automatici “Mix”
“Mix” Push-in Fittings
Raccords Instantanés, “Mix”
“Mix” Steckverschraubungen

I

Raccordi Automatici costituiti da un “MIX” di materiali, ottone/tecnopolimero, che permette di avere una soluzione più economica del raccordo completamente in ottone, senza alcuna penalizzazione a livello di prestazioni.

GB

Push in fittings made of a materials “MIX”, brass and Technopolymer. This line offers a more competitive priced fitting then the whole brass version, without affecting the fitting performance.

F

Raccords instantanés fabriqués en un “MIX” de matériaux, laiton et technopolymere, qui offrent une solution plus compétitive de la série en métal sans aucune pénalisation à niveau de performance.

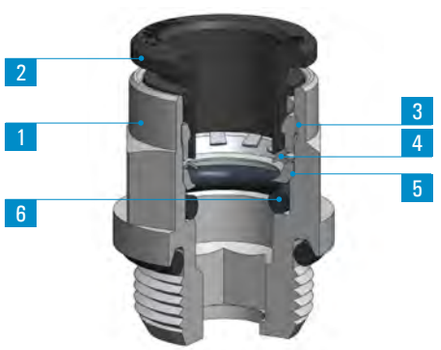
D

Steckverschraubungen aus einem “MIX” von Materialien, Messing und Technopolymer, die eine wettbewerbsfähigere Lösung zu der Metallausführung bietet, ohne die Verschraubungsleistungen zu vermindern.

AP

1	2 - 3	4	5	6
Corpo Body Corps Körper	Anello Estrattore e di Ritegno Release and Holding Ring Poussoir et Bague de retenue Lösering und Haltering	Pinza aggraffaggio Gripping ring Pince Spannzange	Anello portapinza Protection Ring Bague protection Schutzring	Guarnizioni Seals Joint d'étancheité Dichtung
Ottone UNI EN 12164 CW614N - UNI EN 12165 CW617N Nichelato Brass UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickel Plated Laiton UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickelé Messing UNI EN 12164 CW614N - UNI EN 12165 CW617N vernickelt	Resina Acetalica (POM) Acetal Resin (POM) Résine acétal (POM) Azetalharz (POM)	Acciaio INOX AISI 301 Stainless steel AISI 301 Acier Inox AISI 301 Edelstahl AISI 301	Resina Acetalica (POM) Acetal Resin (POM) Résine acétal (POM) Azetalharz (POM)	NBR NBR NBR NBR

-20°C ÷ 80°C Max 20 bar -99 KPa



	M5x0,8	M12x1,5	G1/8	G1/4	G3/8	G1/2	R1/8	R1/4	R3/8	R1/2
4	●		●				●	●		
6	●	●	●	●	●	●	●	●	●	
8			●	●	●	●	●	●	●	●
10			●	●	●	●	●	●	●	●
12				●	●	●		●	●	●

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Polietilene PE, Poliuretano PU (98 Shore A).
Tolleranze accettabili sui tubi:
+/– 0,07 mm fino a Ø 10 mm
+/– 0,1 mm da Ø 12 a Ø 14 mm.

Campi di applicazione:
Impianti pneumatici.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyethylene PE, Polyurethane PU (98 Shore A).
Acceptable Tolerances on the tubings:
+/– 0,07 mm up to Ø 10 mm
+/– 0,1 mm from Ø 12 up to Ø 14 mm.

Application fields:
Pneumatic circuits.

EINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
PA11, PA12, PA6, Polyethylene PE, Polyurethane PU (98 Shore A).
Tolerances sur les tubes:
+/– 0,07 mm jusqu'au Ø 10 mm
+/– 0,1 mm de Ø 12 jusqu'au Ø 14 mm.

Domaines d'application:
Circuits pneumatiques.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyethylen PE, Polyurethan PU (98 Shore A).
Schlauchtoleranzen:
+/– 0,07 mm bis Ø 10 mm
+/– 0,1 mm von Ø 12 bis Ø 14 mm.

Anwendungsbereiche:
Pneumatik

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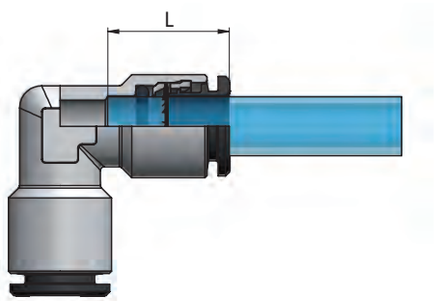
Profondità di inserimento del tubo | Tubing insertion depth | Profondeur d'insertion du tube | Schlaucheinstecktiefe



Øe Tubo	L
4	13,4
6	16,4
8	16,5
10	18,9
12	20,1

ISTRUZIONI DI MONTAGGIO

1. Tagliare il tubo a 90° (servendosi della pinza tagliatubo TCUT) verificando l'assenza di bave interne ed esterne e facendo attenzione che il tubo non si presenti ovalizzato dopo il taglio.
2. Inserire il tubo nel raccordo spingendolo fino in battuta.

Estrazione del tubo
Esercitare una leggera pressione sull'anello estrattore, estraendo contemporaneamente il tubo dal corpo del raccordo.

ASSEMBLY INSTRUCTIONS

1. Cut the tube square (by means of a hose cutter i.e. our TCUT) making sure that no burrs are left and that the tube is not oval.
2. Insert the tube into the fitting until it bottoms.

Tube release
While pressing on the release ring, pull out the tube from the fitting.

INSTRUCTIONS DE MONTAGE

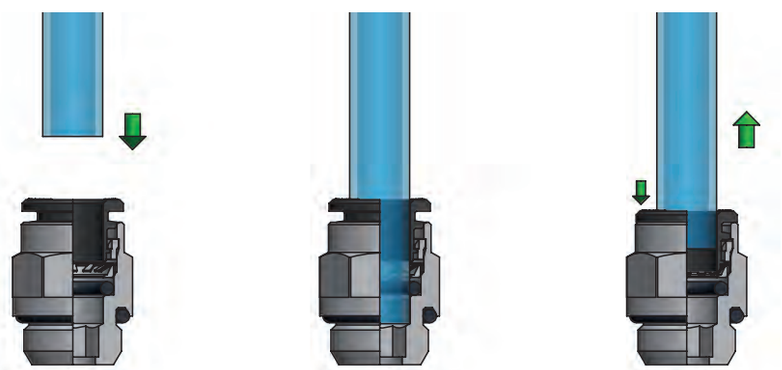
1. Sectionner le tube à 90° par notre coupe tube TCUT en prenant soin de ne par créer des bavures et de ne pas ovaliser le tube.
2. Pousser le tube jusqu' au fond du raccord.

Débranchement du tube
Appuyer sur le poussoir en métal et tirer simultanément sur le tube.

MONTAGEANWEISUNGEN

1. Schlauch mittels unserer Schlauchschere (TCUT) 90° abschneiden und entgraten.
2. Darauf achten, daß der Schlauch danach nicht oval gequetscht ist und dann ihn bis zum Verschraubungsanschlag einstecken.

Schlauchlösen
Auf den Druckring drücken und gleichzeitig den Schlauch rausziehen.



Effettuato il collegamento, assicurarsi che il tubo inserito nel raccordo non sia sottoposto ad alcuna forza di trazione; è necessario inoltre rispettare durante il collegamento del tubo il raggio minimo di curvatura consigliato così come riportato nella sezione tubi di questo catalogo tecnico (vedi pag. 363)
Al fine di evitare lo sgancio involontario del tubo nessun oggetto deve venire a contatto con l'anello estrattore del raccordo evitando così l'esercizio di qualsiasi forza indesiderata, anche solo laterale, che potrebbe causare la pressione dell'anello estrattore e conseguente rilascio del tubo.
Per il serraggio delle parti filettate del raccordo si raccomanda di attenersi alle coppie consigliate riportate a pag.6

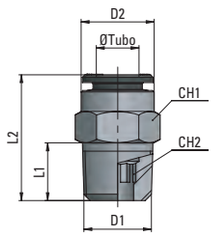
Once the tubing is connected to the fitting, make sure that the tubing is not subject to any tensile strength and that the min. recommended bending radius stated in the tubing section of this catalogue is complied with (see page 363).
To prevent any accidental tube release, no components have to come in touch with the release ring and exercise any unwanted pressure on the same. Indeed however lateral, any load on the release ring may cause the tube disconnection.
To tighten threads, please check out our tightening torque chart illustrated at page 6.

Une fois effectué le branchement, s'assurer que le tube inséré dans le raccord n'est soumis à aucune force de traction. Egalement, il est nécessaire de respecter, lors du branchement du tube, le rayon minimum de courbure conseillé dans la section tubes de ce catalogue technique (voir la page 363).
Afin d'éviter le décrochage involontaire du tube, aucun objet ne doit entrer en contact avec la bague d'extraction du raccord, empêchant ainsi l'exercice de toute force indésirable, ne serait-ce que latérale, qui pourrait provoquer la pression de la bague d'extraction et donc le relâchement du tube.
Pour le serrage des parties filetées du raccord, il est recommandé de s'en tenir aux couples de serrage conseillés et reportés à la page 6.

Nach der Schlauchverbindung, sicherstellen, dass der in die Verschraubung eingeführte Schlauch keinen Zugbelastungen ausgesetzt ist; beim Anschluss des Schlauchs muss der empfohlene Mindestbiegeradius eingehalten werden, gemäß den in diesem technischen Katalog im Schlauchabschnitt, angegebenen Hinweisen (siehe Seite 363).
Um das versehentliche Lösen des Schlauchs zu verhindern, darf kein Gegenstand den Lösering der Verschraubung berühren. Keine unerwünschte Kraft darf auch nicht seitlich einwirken und kein Druck soll auf den Lösering ausgeübt werden, denn dies das Schlauchlösen verursachen könnte.
Zum Festziehen der Gewinde sich an den, auf Seite 6, empfohlenen Drehmomente einhalten.

AP 11

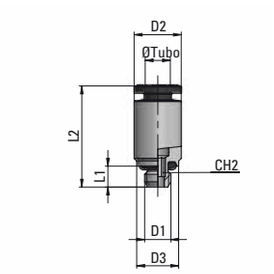
Diritto maschio conico | Straight, male | Union simple mâle conique | Gerade Einschraubverschraubung, kegelig

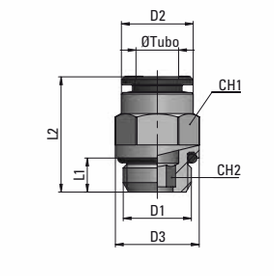


	Type	Ø Tubo	D1	D2	L1	L2	CH1	CH2	g
new	11 04 18	4	R1/8	9	7,5	16	10	3	-
new	11 04 14	4	R1/4	9	11	20,5	14	3	-
new	11 06 18	6	R1/8	11,9	7,5	21,5	12	4	-
new	11 06 14	6	R1/4	11,9	11	21	14	4	-
new	11 06 38	6	R3/8	11,9	11,5	21,5	17	4	-
new	11 08 18	8	R1/8	13,9	7,5	25,5	14	6	-
new	11 08 14	8	R1/4	13,9	11	24	14	6	-
new	11 08 38	8	R3/8	13,9	11,5	23	17	6	-
new	11 08 12	8	R1/2	13,9	14	25,5	22	6	-
new	11 10 18	10	R1/8	15,9	7.5	28	16	6	-
new	11 10 14	10	R1/4	15,9	11	30,5	16	8	-
new	11 10 38	10	R3/8	15,9	11,5	24	17	8	-
new	11 10 12	10	R1/2	15,9	14	27	22	8	-
new	11 12 14	12	R1/4	18,9	11	32,5	19	8	-
new	11 12 38	12	R3/8	18,9	11,5	28	19	10	-
new	11 12 12	12	R1/2	18,9	14	28	22	10	42,3

AP 12

Diritto maschio cilindrico | Parallel straight, male | Union simple mâle cylindrique | Gerade Einschraubverschraubung, zylindrisch



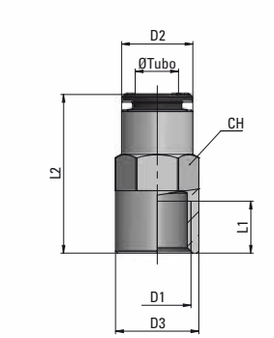


Type	Ø Tubo	D1	D2	D3	L1	L2	CH1	CH2	g
12 04 M5	4	M5x0,8	9	8	4	19	-	2,5	3,5
12 06 M5	6	M5x0,8	12	8	4	22,7	-	2,5	7,2
12 06 M12x1,5	6	M12x1,5	11,9	15	6,5	21,5	12	4	11,4

	Type	Ø Tubo	D1	D2	D3	L1	L2	CH1	CH2	g
	12 04 18	4	G1/8	9	13	5	16,5	9	3	5,3
	12 06 18	6	G1/8	11,9	13,5	5	20	12	4	7,6
	12 06 14	6	G1/4	11,9	16	6,5	20	12	4	11,5
new	12 06 38	6	G3/8	11,9	20	7	21	12	4	-
new	12 06 12	6	G1/2	11,9	25	8,5	23	12	4	-
	12 08 18	8	G1/8	13,9	14,5	5	24	13	6	9,8
	12 08 14	8	G1/4	13,9	16	6,5	22	14	6	12,1
	12 08 38	8	G3/8	13,9	20	7	21,5	14	6	18,4
	12 08 12	8	G1/2	13,9	25	8,5	23,5	14	6	32,8
new	12 10 18	10	G1/8	15,9	13	5	27	15	8	-
	12 10 14	10	G1/4	15,9	16,5	6,5	27,5	15	8	15
	12 10 38	10	G3/8	15,9	20	7	25	16	8	19,8
	12 10 12	10	G1/2	15,9	25	8,5	25,5	16	8	32,5
	12 12 14	12	G1/4	18,9	21	6,5	29	19	8	23
	12 12 38	12	G3/8	18,9	21	7	29	19	10	25,7
	12 12 12	12	G1/2	18,9	25	8,5	27	19	10	33,3

AP 13

Diritto femmina | Female straight | Union simple femelle | Gerade Aufschraubverschraubung



Type	Ø Tubo	D1	D2	D3	L1	L2	CH	g
13 04 18	4	G1/8	9	13	7	23,5	9	9
13 06 18	6	G1/8	11,9	14	7	26,5	12	14,1
13 06 14	6	G1/4	11,9	16	10	30,5	12	17,2
13 08 18	8	G1/8	13,7	16,2	7	26,5	14	16,5
13 08 14	8	G1/4	13,9	16	10	30,5	14	18,5
13 10 14	10	G1/4	15,9	18,5	10	32	16	22
13 10 38	10	G3/8	15,9	20	11	33,5	16	27,8

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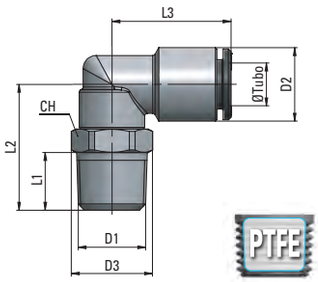
AP 15

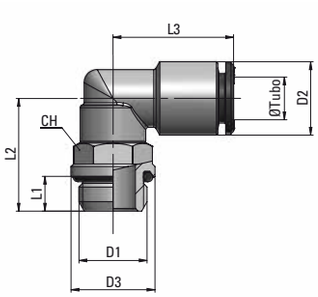
Gomito maschio conico girevole | Taper swivelling elbow fitting, male | Raccord à coude tournant, mâle conique | Schwenkbare Winkelverschraubung, kegelig



	Type	Ø Tubo	D1	D2	D3	L1	L2	L3	CH	g
new	15 04 18	4	R1/8	9,1	11,2	7,5	17,85	19,5	10	10,8
new	15 04 14	4	R1/4	9,1	15,5	11	24,2	19,5	14	20,9
new	15 06 18	6	R1/8	12	14,5	7,5	20,2	22	13	19,4
new	15 06 14	6	R1/4	12	15,5	11	24,2	22	14	23,9
new	15 06 38	6	R3/8	12	20	11,5	25,2	22	18	-
new	15 08 18	8	R1/8	14	14,5	7,5	20	22,5	13	23
new	15 08 14	8	R1/4	14	15,5	11	24	22,5	14	26,4
new	15 08 38	8	R3/8	14	20	11,5	27	23	18	39,2
new	15 08 12	8	R1/2	14	24,5	14	31	23	22	-
new	15 10 18	10	R1/8	16	20	7,5	26,5	23	16	-
new	15 10 14	10	R1/4	16	20	11	26,5	26	18	38,6
new	15 10 38	10	R3/8	16	20	11,5	27	26	18	41
new	15 10 12	10	R1/2	16	24,5	14	31	26	22	-
new	15 12 14	12	R1/4	19	22,5	11	30	28,5	20	-
new	15 12 38	12	R3/8	19	22,5	11,5	30,5	28,5	20	61,8
new	15 12 12	12	R1/2	19	24,5	14	33,5	28,5	22	71,5

AP 16

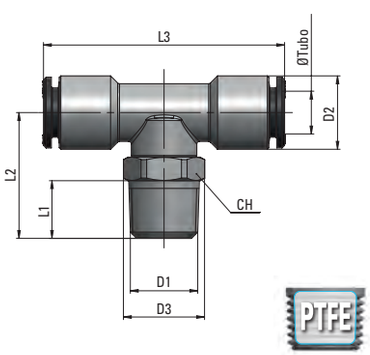
Gomito maschio cilindrico girevole | Parallel swivelling elbow fitting, male | Raccord à coude tournant, mâle cylindrique | Schwenkbare Winkelverschraubung, zylindrisch



	Type	Ø Tubo	D1	D2	D3	L1	L2	L3	CH	g
	16 04 M5	4	M5x0,8	9,1	10	4	14	17,5	9	7,8
	16 04 18	4	G1/8	9,1	14,5	5	18,2	19,5	13	14,7
	16 06 M5	6	M5x0,8	12	10	4	14	21	9	11,9
	16 06 18	6	G1/8	12	14,5	5	18,2	22,5	13	17,2
	16 06 14	6	G1/4	12	16	6,5	21,7	22,5	13	20,6
new	16 06 38	6	G3/8	12	20	7	22,2	22,5	13	-
new	16 06 12	6	G1/2	12	25	8,5	24,2	22,5	13	-
	16 08 18	8	G1/8	14	14,5	5	18	23	13	20,5
	16 08 14	8	G1/4	14	16	6,5	21,5	23	13	23,7
	16 08 38	8	G3/8	14	20	7	25,5	23,5	16	35,6
new	16 10 18	10	G1/8	16	18	5	20,5	26	16	-
	16 10 14	10	G1/4	16	18	6,5	22	26	16	31,6
	16 10 38	10	G3/8	16	20	7	25,5	26	16	36,4
	16 10 12	10	G1/2	16	25	8,5	27,5	26	16	40,9
	16 12 14	12	G1/4	19	22,5	6,5	25,5	29	20	54,7
	16 12 38	12	G3/8	19	22,5	7	26	29	20	53,2
	16 12 12	12	G1/2	19	25	8,5	30,5	29	20	61,1

AP 20

T centrale maschio conico girevole | Swivelling tee fitting | Raccord à té tournant, mâle conique | T-Verschraubung, schwenkbar und kegelig



	Type	Ø Tubo	D1	D2	D3	L1	L2	L3	CH	g
new	20 04 18	4	R1/8	9,1	14,5	7,5	20,2	39	13	-
new	20 04 14	4	R1/4	9,1	15,5	11	24,2	39	14	-
new	20 06 18	6	R1/8	12	14,5	7,5	20,5	44	13	-
new	20 06 14	6	R1/4	12	15,5	11	24,5	44	14	-
new	20 08 18	8	R1/8	14	14,5	7,5	20,5	45	13	-
new	20 08 14	8	R1/4	14	15,5	11	24,5	45	14	-
new	20 08 38	8	R3/8	14	20	11,5	27,5	46	18	-
new	20 10 14	10	R1/4	16	20	11	26,5	52	18	-
new	20 10 38	10	R3/8	16	20	11,5	27	52	18	-
new	20 12 38	12	R3/8	19	22,5	11,5	31	57	20	-
new	20 12 12	12	R1/2	19	24,5	14	34	57	22	-

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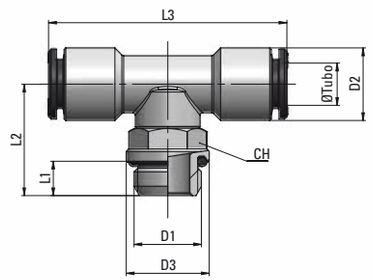
AP 21

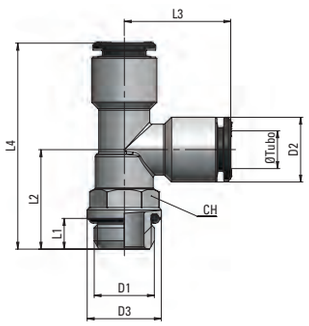
T centrale maschio cilindrico girevole | Swivelling tee fitting, parallel | Raccord à té tournant, mâle cylindrique | T-Verschraubung, schwenkbar und zylindrisch



Type	Ø Tubo	D1	D2	D3	L1	L2	L3	CH	g
21 04 18	4	G1/8	9,1	14,5	5	18,2	39	13	18,5
21 06 18	6	G1/8	12	14,5	5	18	45	13	23
21 06 14	6	G1/4	12	16	6,5	21,5	45	13	26,8
21 08 18	8	G1/8	14	14,5	5	18	46	13	26,9
21 08 14	8	G1/4	14	16	6,5	21,5	46	13	30,4
21 10 14	10	G1/4	16	18	6,5	22	52	16	40,3
21 10 38	10	G3/8	16	20	7	25,5	52	16	45
21 12 38	12	G3/8	19	22,5	7	26	58	20	68,6
21 12 12	12	G1/2	19	25	8,5	30,5	58	20	76,3

AP 24

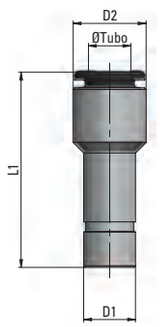
T laterale maschio cilindrico girevole | Lateral run tee fitting, parallel | Raccord à té latéral cylindrique, tournant | T-Schwenkverschraubung, zylindrisch



Type	Ø Tubo	D1	D2	D3	L1	L2	L3	L4	CH	g
24 04 18	4	G1/8	9,1	14,5	5	18,2	19,5	37,5	13	-
24 06 18	6	G1/8	12	14,5	5	18,2	22,5	40,7	13	23,5
24 06 14	6	G1/4	12	16	6,5	21,7	22,5	44,2	13	-
24 08 18	8	G1/8	14	14,5	5	18	23	41	13	27,2
24 08 14	8	G1/4	14	16	6,5	21,5	23	44,5	13	30,8
24 10 14	10	G1/4	16	18	6,5	22	26	48	16	40
24 10 38	10	G3/8	16	20	7	25,5	26	51,5	16	-
24 12 38	12	G3/8	19	22,5	7	26	29	55	20	-
24 12 12	12	G1/2	19	25	8,5	30,5	29	59,5	20	75,5

AP 25

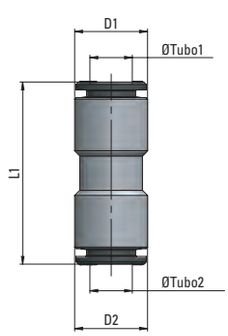
Riduzione | Reducer | Réduction | Reduzierstück



Type	Ø Tubo	D1	D2	L1	g
25 04 06	4	6	9	33,5	5,6
25 04 08	4	8	9	33,5	9,7
25 06 04	6	4	12	36	8,5
25 06 08	6	8	12	35,5	10
25 06 10	6	10	12	37	15,2
25 08 06	8	6	14	40	12
25 08 10	8	10	14	37,5	13,2
25 08 12	8	12	14	39,5	20,7
25 10 12	10	12	16	42	17,6
25 10 14	10	14	16	42	-
25 12 14	12	14	19	43,5	-

AP 26

Giunzione intermedia | Union | Union simple égale | Gerade Verbindung



Type	Ø Tubo1	Ø Tubo2	D1	D2	L1	g
26 04 04	4	4	9	9	28	5
26 06 06	6	6	12	12	34,6	12,5
26 06 04	6	4	12	12	31,5	12,6
26 08 08	8	8	14	14	35	14,6
26 08 06	8	6	14	14	35	18,2
26 10 10	10	10	16	16	38,6	18
26 10 08	10	8	16	16	37	21,3
26 12 12	12	12	19	19	42	30,3
new 26 12 08	12	8	19	14	40	-
new 26 12 10	12	10	19	16	41	-

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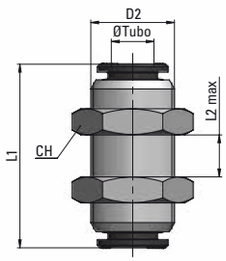
AP 27

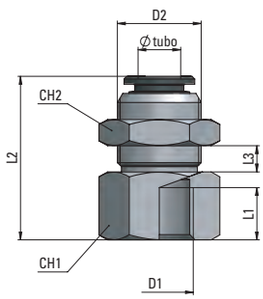
Giunzione intermedia passaparete | Bulkhead union | Union traversée de cloison | Gerade Schottverschraubung



Type	Ø Tubo	D2	L1	L2	CH	g
27 04 04	**4**	M12x1	28	11	16	21,9
27 06 06	**6**	M14x1	35	16	18	30,9
27 08 08	**8**	M16x1	35	16	20	36,2
27 10 10	**10**	M18x1	39	19	22	47,1
27 12 12	**12**	M20x1	42	20	24	53,5

AP 27-F

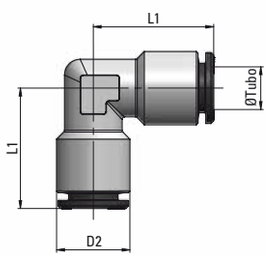
Giunzione intermedia passaparete, femmina | Bulkhead union, female | Union traversée de cloison, femelle | Gerade Schottverschraubung weiblich



	Type	Ø Tubo	D1	D2	L1	L2	L3	CH1	CH2	g
new	**27 06 18 -F**	**6**	G1/8	M14x1	7	27	9	18	18	-
new	**27 06 14 -F**	**6**	G1/4	M14x1	10	31	9	18	18	-
new	**27 08 18 -F**	**8**	G1/8	M16x1	7	27	9	20	20	-
new	**27 08 14 -F**	**8**	G1/4	M16x1	10	31	9	20	20	-
new	**27 10 38 -F**	**10**	G3/8	M18x1	11	33	10	22	22	-

AP 28

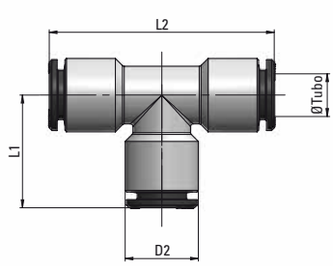
Gomito intermedio | Union elbow | Raccord à coude | Winkelverschraubung



Type	Ø Tubo	D2	L1	g
28 04 04	**4**	9	17,5	6,9
28 06 06	**6**	12	21	14
28 08 08	**8**	14	23	18,9
28 10 10	**10**	16	25	24
28 12 12	**12**	19	27	42,4

AP 29

T intermedio | Union tee | T égal | T-Verschraubung



Type	Ø Tubo	D2	L1	L2	g
29 04 04	**4**	9	17,5	35	10
29 06 06	**6**	12	20,5	41	18,5
29 08 08	**8**	14	21,5	43	23
29 10 10	**10**	16	24,5	49	32,2
29 12 12	**12**	19	26,5	53	51,5

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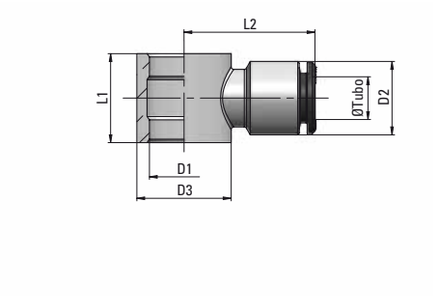
AP 35

Anello singolo | Single banjo ring | Banjo simple | Ringstück

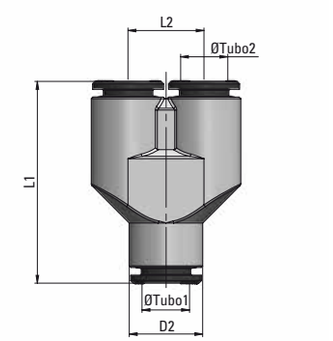


Type	Ø Tubo	D_1	D_2	D_3	L_1	L_2	g ⚖
35 04 M5	**4**	**M5**	9,1	10	9	18,5	7,7
35 04 M5 /R	**4**	**7**	9,1	10	10	18,5	6,6
35 04 18	**4**	**1/8**	9,1	14	15	20,5	13,5
35 06 M5 /R	**6**	**7**	12	10	10	22	10,1
35 06 18	**6**	**1/8**	12	14	15	23	15,5
35 06 14	**6**	**1/4**	12	18	17	24,5	21,6
35 08 18	**8**	**1/8**	14	14	15	24	15,1
35 08 14	**8**	**1/4**	14	18	17	25	20,5
35 10 14	**10**	**1/4**	16	18	17	27	-
35 10 38	**10**	**3/8**	16	22	20	29	-
35 12 38	**12**	**3/8**	19	22	20	30	36,9
35 12 12	**12**	**1/2**	19	26	24	32	-

/R = Solo per regolatori di flusso - For flow controls only - Seulement pour les réducteurs de débit - Nur für Drosselrückschlagventil

AP 37

Y | Y fitting | Raccord à Y | Y-Verschraubung



Type	Ø $Tubo_1$	Ø $Tubo_2$	D_2	L_1	L_2	g ⚖
37 04 04	**4**	**4**	9	29,5	9,5	11,9
37 06 06	**6**	**6**	12	37,5	12,5	28,9
37 06 04	**6**	**4**	12	34,6	11	32
37 08 08	**8**	**8**	14	38,5	14,5	38,2
37 08 06	**8**	**6**	14	38,5	14,5	46,9
37 10 10	**10**	**10**	16	44,5	16,5	57
37 10 08	**10**	**8**	16	44,5	16,5	-
37 12 12	**12**	**12**	19	50	19,5	88,2

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Raccords rotatives idéales pour des applications avec mouvements de rotation et oscillation.

D

Drehverschraubungen tauglich bei Anwendungen mit Dreh und Schwenkbewegungen.

AR

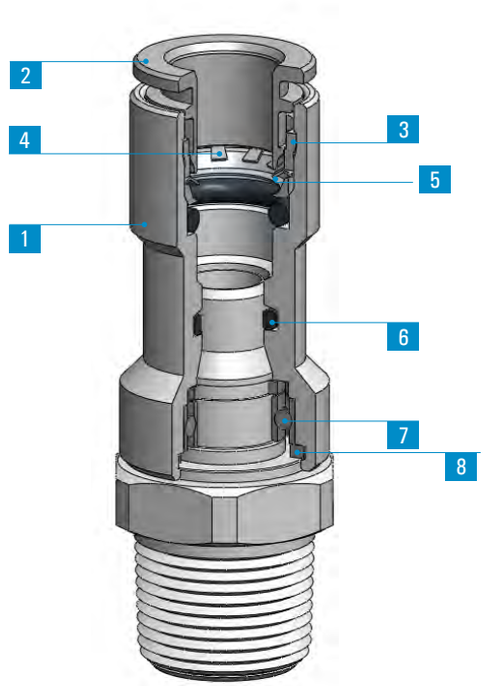
1 - 2	3	4	5	6	7	8
Corpo ed Anello Estrattore Body and Release Ring Corps et poussoir Körper und Lösering	Anello di Ritegno Holding Ring Bague de retenue Haltering	Pinza aggraffaggio Gripping ring Pince Spannzange	Anello portapinza Protection Ring Bague protection Schutzring	Guarnizioni Seals Joint d'étancheité Dichtung	Cuscinetto a sfere Ball bearing Roulement à billes Kugellager	Seeger Seeger Seeger Seeger
Ottone UNI EN 12164 CW614N - UNI EN 12165 CW617N Nichelato Brass UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickel Plated Laiton UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickelé Messing UNI EN 12164 CW614N - UNI EN 12165 CW617N vernickelt	Resina Acetalica (POM) Acetal Resin (POM) Résine acétal (POM) Azetalharz (POM)	Acciaio INOX AISI 301 Stainless steel AISI 301 Acier Inox AISI 301 Edelstahl AISI 301	Resina Acetalica (POM) Acetal Resin (POM) Résine acétal (POM) Azetalharz (POM)	NBR NBR NBR NBR	Acciaio 100Cr6 Steel 100Cr6 Acier 100Cr6 Stahl 100Cr6	Acciaio INOX AISI 302 Stainless steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302

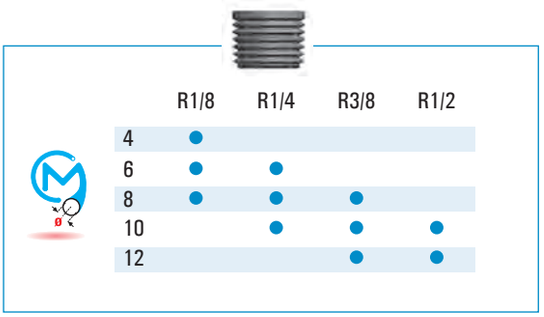
-20°C ÷ 80°C

Max 20 bar

-99 KPa

Ø Tube	Ø4	Ø6	Ø8	Ø10	Ø12
Numero di giri Number of turns Numero de tours Drehanzahl	500 rpm	500 rpm	400 rpm	300 rpm	250 rpm





SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
Tubo in Poliuretano (PU); si sconsiglia l'uso di tubi rigidi.

Campi di applicazione:
Impianti pneumatici.

Evitare carichi laterali sul tubo che possono generare carichi eccessivi sul cuscinetto compromettendone rotazione e durata.

DATA SHEET

Recommended tubings:
Polyurethane (PU); rigid tubings are not recommended.

Application fields:
Pneumatic circuits.

Avoid side loadings on the tube to prevent overloads on the bearings. This could affect rotation as well as the product lifetime.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
Polyuréthane (PU); les tubes rigides ne sont pas conseillés.

Domaines d'application:
Circuits pneumatiques.

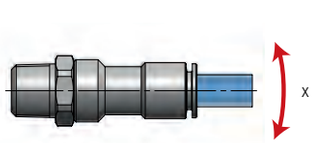
Eviter les charges latérales sur les tuyaux qui peuvent engendrer des charges excessives sur les roulements et compromettre la rotation et la durée du raccord.

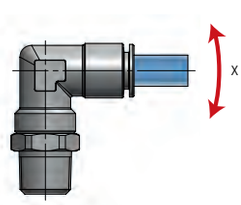
TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Polyurethan (PU); starre schläuche sind nicht empfohlen.

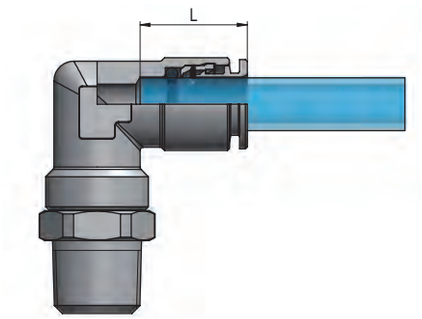
Anwendungsbereiche:
Pneumatik

Seitenlast am Schlauch vermeiden, die zur übermäßigen Belastung auf die Kugellager führen könnte und dadurch die Rotationen und Lebensdauer der Verschraubung beeinträchtigen.





Profondità di inserimento del tubo | Tubing insertion depth | Profondeur d'insertion du tube | Schlaucheinstecktiefe



Øe Tube	L
4	13,2
6	16,1
8	16,2
10	18,3
12	19,5

ISTRUZIONI DI MONTAGGIO

1. Tagliare il tubo a 90° (servendosi della pinza tagliatubo TCUT) verificando l'assenza di bave interne ed esterne e facendo attenzione che il tubo non si presenti ovalizzato dopo il taglio.
2. Inserire il tubo nel raccordo spingendolo fino in battuta.

Estrazione del tubo
Esercitare una leggera pressione sull'anello estrattore, estraendo contemporaneamente il tubo dal corpo del raccordo.

ASSEMBLY INSTRUCTIONS

1. Cut the tube square (by means of a hose cutter i.e. our TCUT) making sure that no burrs are left and that the tube is not oval.
2. Insert the tube into the fitting until it bottoms.

Tube release
While pressing on the release ring, pull out the tube from the fitting.

INSTRUCTIONS DE MONTAGE

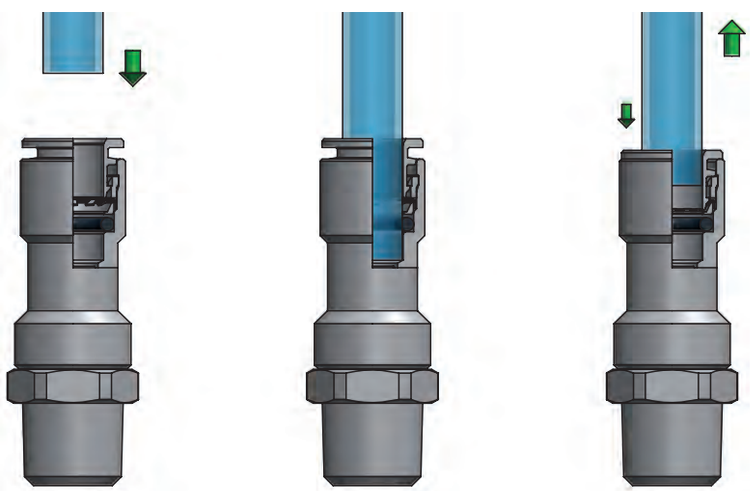
1. Sectionner le tube à 90° par notre coupe tube TCUT en prenant soin de ne par créer des bavures et de ne pas ovaliser le tube.
2. Pousser le tube jusqu' au fond du raccord.

Débranchement du tube
Appuyer sur le poussoir en métal et tirer simultanément sur le tube.

MONTAGEANWEISUNGEN

1. Schlauch mittels unserer Schlauchschere (TCUT) 90° abschneiden und entgraten.
2. Darauf achten, daß der Schlauch danach nicht oval gequetscht ist und dann ihn bis zum Verschraubungsanschlag einstecken.

Schlauchlösen
Auf den Druckring drücken und gleichzeitig den Schlauch rausziehen.



Effettuato il collegamento, assicurarsi che il tubo inserito nel raccordo non sia sottoposto ad alcuna forza di trazione; è necessario inoltre rispettare durante il collegamento del tubo il raggio minimo di curvatura consigliato così come riportato nella sezione tubi di questo catalogo tecnico (vedi pag. 363)
Al fine di evitare lo sgancio involontario del tubo nessun oggetto deve venire a contatto con l'anello estrattore del raccordo evitando così l'esercizio di qualsiasi forza indesiderata, anche solo laterale, che potrebbe causare la pressione dell'anello estrattore e conseguente rilascio del tubo.
Per il serraggio delle parti filettate del raccordo si raccomanda di attenersi alle coppie consigliate riportate a pag.6

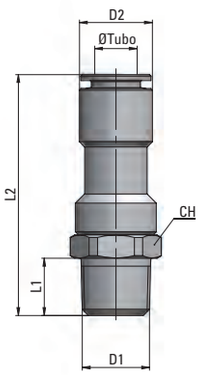
Once the tubing is connected to the fitting, make sure that the tubing is not subject to any tensile strength and that the min. recommended bending radius stated in the tubing section of this catalogue is complied with (see page 363).
To prevent any accidental tube release, no components have to come in touch with the release ring and exercise any unwanted pressure on the same. Indeed however lateral, any load on the release ring may cause the tube disconnection.
To tighten threads, please check out our tightening torque chart illustrated at page 6.

Une fois effectué le branchement, s'assurer que le tube inséré dans le raccord n'est soumis à aucune force de traction. Egalement, il est nécessaire de respecter, lors du branchement du tube, le rayon minimum de courbure conseillé dans la section tubes de ce catalogue technique (voir la page 363).
Afin d'éviter le décrochage involontaire du tube, aucun objet ne doit entrer en contact avec la bague d'extraction du raccord, empêchant ainsi l'exercice de toute force indésirable, ne serait-ce que latérale, qui pourrait provoquer la pression de la bague d'extraction et donc le relâchement du tube.
Pour le serrage des parties filetées du raccord, il est recommandé de s'en tenir aux couples de serrage conseillés et reportés à la page 6.

Nach der Schlauchverbindung, sicherstellen, dass der in die Verschraubung eingeführte Schlauch keinen Zugbelastungen ausgesetzt ist; beim Anschluss des Schlauchs muss der empfohlene Mindestbiegeradius eingehalten werden, gemäß den in diesem technischen Katalog im Schlauchabschnitt, angegebenen Hinweisen (siehe Seite 363).
Um das versehentliche Lösen des Schlauchs zu verhindern, darf kein Gegenstand den Lösering der Verschraubung berühren. Keine unerwünschte Kraft darf auch nicht seitlich einwirken und kein Druck soll auf den Lösering ausgeübt werden, denn dies das Schlauchlösen verursachen könnte.
Zum Festziehen der Gewinde sich an den, auf Seite 6, empfohlenen Drehmomente einhalten.

AR 11

Diritto maschio Conico rotante | Straight male fitting, rotating | Raccord droit mâle, rotatif | Einschraubverschraubung, rotatorisch

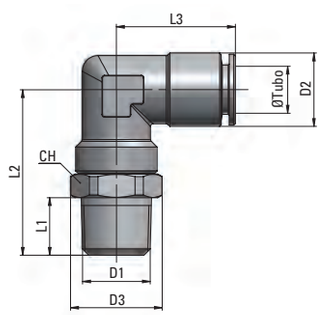


PTFE

Type	Ø Tubo	D_1	D_2	L_1	L_2	CH	g
11 04 18	**4**	**R1/8**	9	7,5	37,7	13	18,6
11 06 18	**6**	**R1/8**	12	7,5	40,1	13	22,5
11 06 14	**6**	**R1/4**	12	11	44,1	14	25,8
11 08 18	**8**	**R1/8**	14	7,5	42,6	16	31,3
11 08 14	**8**	**R1/4**	14	11	46,1	16	33,5
11 08 38	**8**	**R3/8**	14	11,5	47,1	18	38,5
11 10 14	**10**	**R1/4**	16	11	52,6	22	58,7
11 10 38	**10**	**R3/8**	16	11,5	53,1	22	-
11 10 12	**10**	**R1/2**	16	14	55,6	22	-
11 12 38	**12**	**R3/8**	19	11,5	54,6	22	73,6
11 12 12	**12**	**R1/2**	19	14	57,1	22	80,1

AR 15

Gomito maschio conico rotante | Elbow male fitting, rotating | Raccord à coude, rotatif | L- Einschraubverschraubung, rotatorisch



PTFE

Type	Ø Tubo	D_1	D_2	D_3	L_1	L_2	L_3	CH	g
15 04 18	**4**	**R1/8**	9	14,5	7,5	25,3	19,5	13	21,6
15 06 18	**6**	**R1/8**	12	14,5	7,5	25,3	22	13	24,5
15 06 14	**6**	**R1/4**	12	15,5	11	29,3	22	14	27,9
15 08 18	**8**	**R1/8**	14	17,5	7,5	28,1	22,5	16	40,1
15 08 14	**8**	**R1/4**	14	17,5	11	31,6	22,5	16	41,8
15 08 38	**8**	**R3/8**	14	20	11,5	32,6	22,5	18	47,5
15 10 14	**10**	**R1/4**	17	24	11	37,1	26,5	22	85,5
15 10 38	**10**	**R3/8**	17	24	11,5	37,6	26,5	22	89
15 10 12	**10**	**R1/2**	17	24,5	14	40,1	26,5	22	94,1
15 12 38	**12**	**R3/8**	19	24	11,5	38,6	28,5	22	90,3
15 12 12	**12**	**R1/2**	19	24,5	14	41,1	28,5	22	96,1

trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

PN LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi Automatici in Pollici/NPT
Push-in Fittings, Inch/NPT
Raccords Instantanés, Pouce/NPT
Steckverschraubungen, Zoll/NPT

I

I Raccordi Automatici in ottone della serie PN, conformi allo Standard Americano (tubi in Pollici e filettatura NPT), sono il prodotto ideale per realizzare rapide connessioni nelle più svariate applicazioni Industriali; robusti e compatti i raccordi PN garantiscono ottime performance nel tempo.
Tutti i raccordi della serie PN vengono sottoposti a trattamento superficiale di Nichelatura.

GB

The push-in fittings of the PN line are manufactured according to the American standards (Inch tubings and NPT Threads). They are suitable for quick connections in different industrial applications; they are robust, compact and guarantee high performances in time.
All PN fittings are electrolytic nickel-plated.

F

Les raccords de la série PN sont réalisés selon les standards américaines (tube en pouce et filetage en NPT); ils sont le produit idéal pour réaliser des connexion rapides dans plusieurs domaines industriels; robustes et compactes les PN garantissent une performance excellente dans le temps.
Tous les raccords de la série PN sont en laiton et soumis au traitement de nickelage électrolytique.

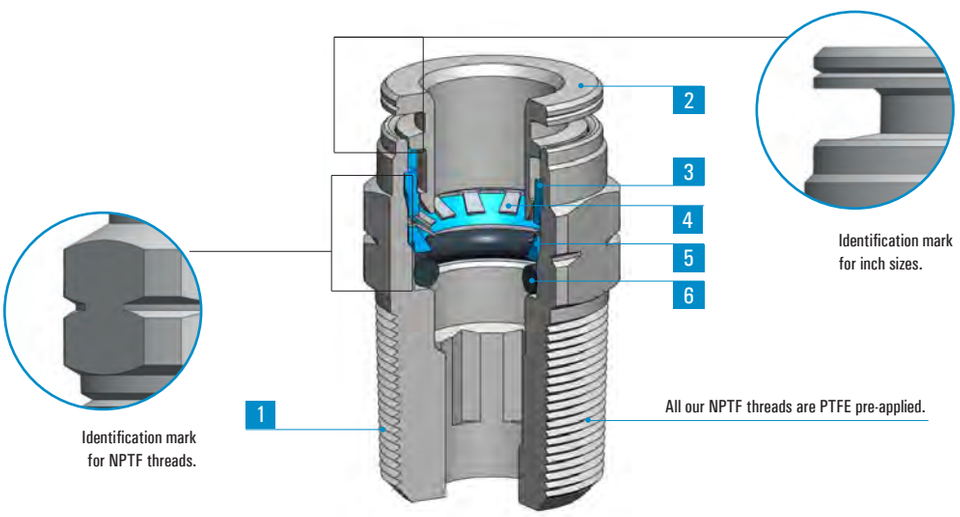
D

Die PN Verschraubungen, gemäß den amerikanischen Vorschriften hergestellt (zoellige Schläuche und NPT Gewinden), sind ideal für schnelle Verbindungen und für zahlreiche Anwendungsbereiche. Fest und kompakt gewährleisten die PN Verschraubung hervorragende Leistungen im Laufe der Zeit.
Die PN Verschraubungen sind aus Messing, elektrolytisch vernickelt.

PN

1 - 2	3	4	5	6
Corpo ed Anello Estrattore Body and Release Ring Corps et poussoir Körper und Lösering	Anello di Ritegno Holding Ring Bague de retenue Haltering	Pinza aggraffaggio Gripping ring Pince Spannzange	Anello portapinza Protection Ring Bague protection Schutzring	Guarnizioni Seals Joint d'étancheité Dichtung
Ottone UNI EN 12164 CW614N - UNI EN 12165 CW617N Nichelato Brass UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickel Plated Laiton UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickelé Messing UNI EN 12164 CW614N - UNI EN 12165 CW617N vernickelt	Resina Acetalica (POM) Acetal Resin (POM) Résine acétal (POM) Azetalharz (POM)	Acciaio INOX AISI 301 Stainless steel AISI 301 Acier Inox AISI 301 Edelstahl AISI 301	Resina Acetalica (POM) Acetal Resin (POM) Résine acétal (POM) Azetalharz (POM)	NBR NBR NBR NBR

-20°C ÷ 80°C Max 20 bar -99 KPa



	10-32 UNF	1/8 NPTF	1/4 NPTF	3/8 NPTF	1/2 NPTF
1/8	●	●			
5/32	●	●	●		
1/4		●	●	●	
5/16		●	●	●	
3/8		●	●	●	●
1/2			●	●	●

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Polietilene PE, Poliuretano PU (98 Shore A).
Tolleranze accettabili sui tubi:
+/– 0,07 mm fino a Ø 3/8"
+/– 0,1 mm Ø 1/2".

Campi di applicazione:
Impianti pneumatici.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyethylene PE, Polyurethane PU (98 Shore A).
Acceptable Tolerances on the tubings:
+/– 0,07 mm up to Ø 3/8"
+/– 0,1 mm Ø 1/2".

Application fields:
Pneumatic circuits.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
PA11, PA12, PA6, Polyethylene PE, Polyurethane PU (98 Shore A).
Tolerances sur les tubes:
+/– 0,07 mm jusqu'au Ø 3/8"
+/– 0,1 mm Ø 1/2".

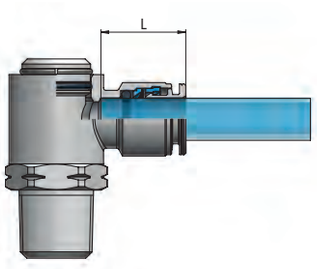
Domaines d'application:
Circuits pneumatiques.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyethylen PE, Polyurethan PU (98 Shore A).
Schlauchtoleranzen:
+/– 0,07 mm bis Ø 3/8"
+/– 0,1 mm Ø 1/2"

Anwendungsbereiche:
Pneumatik

Profondità di inserimento del tubo | Tubing insertion depth | Profondeur d'insertion du tube | Schlaucheinstecktiefe



Øe Tube	L
1/8	9,8
5/32	13,2
1/4	16,1
5/16	16,2
3/8	18,3
1/2	19,5

ISTRUZIONI DI MONTAGGIO

1. Tagliare il tubo a 90° (servendosi della pinza tagliatubo TCUT) verificando l'assenza di bave interne ed esterne e facendo attenzione che il tubo non si presenti ovalizzato dopo il taglio.
   In caso di utilizzo di tubo metallico praticare una scanalatura sul tubo mediante apposito apparecchio (TINC). L'esecuzione della scanalatura sul tubo deve essere in funzione del diametro del tubo in modo da permettere il corretto aggraffaggio della pinza di tenuta del raccordo.
2. Inserire il tubo nel raccordo spingendolo fino in battuta.

Estrazione del tubo
Esercitare una leggera pressione sull'anello estrattore, estraendo contemporaneamente il tubo dal corpo del raccordo.

ASSEMBLY INSTRUCTIONS

1. Cut the tube square (by means of a hose cutter i.e. our TCUT) making sure that no burrs are left and that the tube is not oval.
   In case of use with metal hoses, make a groove all around the tube diameter with a suitable tool (TINC).The groove must be made according to the tube diameter so that the fitting collect can better grip onto it.
2. Insert the tube into the fitting until it bottoms.

Tube release
While pressing on the release ring, pull out the tube from the fitting.

INSTRUCTIONS DE MONTAGE

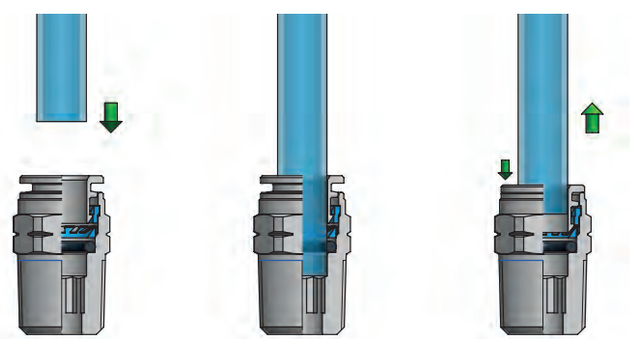
1. Sectionner le tube à 90° par notre coupe tube TCUT en prenant soin de ne par créer des bavures et de ne pas ovaliser le tube.
   Pour l'emploi avec des tubes en métal, pratiquer une rainure le long du diamètre du tube par un outil adéquat pour l'usage (TINC). La rainure devra toujours être en fonction du diamètre du tube, pour que la pince puisse bien l'agrafer.
2. Pousser le tube jusqu' au fond du raccord.

Débranchement du tube
Appuyer sur le poussoir en métal et tirer simultanément sur le tube.

MONTAGEANWEISUNGEN

1. Schlauch mittels unserer Schlauchschere (TCUT) 90° abschneiden und entgraten. Bei Montage mit Metallrohren, eine Nut um den Rohrdurchmesser herum mit dem dazu geeigneten Werkzeug machen (TINC). Die Nut muss im Verhältnis zu dem Rohrdurch messer stehen, damit die Spannange gut daran klammern kann.
2. Darauf achten, daß der Schlauch danach nicht oval gequetscht ist und dann ihn is zum Verschraubungsanschlag einstecken.

Schlauchlösen
Auf den Druckring drücken und gleichzeitig den Schlauch rausziehen.



Effettuato il collegamento, assicurarsi che il tubo inserito nel raccordo non sia sottoposto ad alcuna forza di trazione; è necessario inoltre rispettare durante il collegamento del tubo il raggio minimo di curvatura consigliato così come riportato nella sezione tubi di questo catalogo tecnico (vedi pag. 363)
Al fine di evitare lo sgancio involontario del tubo nessun oggetto deve venire a contatto con l'anello estrattore del raccordo evitando così l'esercizio di qualsiasi forza indesiderata, anche solo laterale, che potrebbe causare la pressione dell'anello estrattore e conseguente rilascio del tubo.
Per il serraggio delle parti filettate del raccordo si raccomanda di attenersi alle coppie consigliate riportate a pag.6

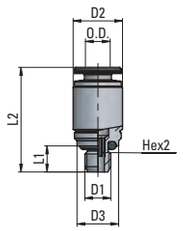
Once the tubing is connected to the fitting, make sure that the tubing is not subject to any tensile strength and that the min. recommended bending radius stated in the tubing section of this catalogue is complied with (see page 363).
To prevent any accidental tube release, no components have to come in touch with the release ring and exercise any unwanted pressure on the same. Indeed however lateral, any load on the release ring may cause the tube disconnection.
To tighten threads, please check out our tightening torque chart illustrated at page 6.

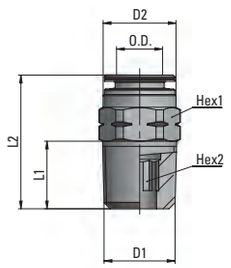
Une fois effectué le branchement, s'assurer que le tube inséré dans le raccord n'est soumis à aucune force de traction. Egalement, il est nécessaire de respecter, lors du branchement du tube, le rayon minimum de courbure conseillé dans la section tubes de ce catalogue technique (voir la page 363).
Afin d'éviter le décrochage involontaire du tube, aucun objet ne doit entrer en contact avec la bague d'extraction du raccord, empêchant ainsi l'exercice de toute force indésirable, ne serait-ce que latérale, qui pourrait provoquer la pression de la bague d'extraction et donc le relâchement du tube.
Pour le serrage des parties filetées du raccord, il est recommandé de s'en tenir aux couples de serrage conseillés et reportés à la page 6.

Nach der Schlauchverbindung, sicherstellen, dass der in die Verschraubung eingeführte Schlauch keinen Zugbelastungen ausgesetzt ist; beim Anschluss des Schlauchs muss der empfohlene Mindestbiegeradius eingehalten werden, gemäß den in diesem technischen Katalog im Schlauchabschnitt, angegebenen Hinweisen (siehe Seite 363).
Um das versehentliche Lösen des Schlauchs zu verhindern, darf kein Gegenstand den Lösering der Verschraubung berühren. Keine unerwünschte Kraft darf auch nicht seitlich einwirken und kein Druck soll auf den Lösering ausgeübt werden, denn dies das Schlauchlösen verursachen könnte.
Zum Festziehen der Gewinde sich an den, auf Seite 6, empfohlenen Drehmomente einhalten.

PN 11

Diritto maschio conico | Taper straight, male | Union simple mâle conique | Gerade Einschraubverschraubung, kegelig





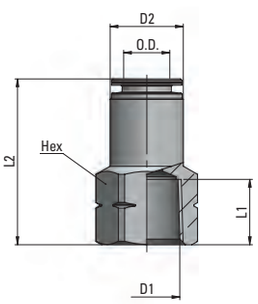
PTFE

Type	Tube OD	D1 UNF	D2	D3	L1	L2	HEX1	HEX2	g
11 1/8 10-32	1/8"	10-32	7	8	5	17,7	-	3/32	2,5
11 5/32 10-32	5/32"	10-32	9,5	8	5	20	-	3/32	4,5
11 1/4 10-32	1/4"	10-32	12	8	5	23,5	-	3/32	8,5

Type	Tube OD	D1 NPTF	D2	D3	L1	L2	HEX1	HEX2	g
11 1/8 1/8	1/8"	1/8	7	-	8,5	19	7/16	3/32	9,5
11 5/32 1/8	5/32"	1/8	9,5	-	8,5	19,5	7/16"	1/8	9
11 5/32 1/4	5/32"	1/4	9,5	-	13	24	9/16"	1/8	20
11 1/4 1/8	1/4"	1/8	12	-	8,5	22	1/2"	5/32	10,5
11 1/4 1/4	1/4"	1/4	12	-	13	24,5	9/16"	5/32	18,5
11 1/4 3/8	1/4"	3/8	12	-	13	25,5	11/16	5/32	31,9
11 5/16 1/8	5/16"	1/8	14	-	8,5	26,5	9/16"	3/16	15
11 5/16 1/4	5/16"	1/4	14	-	13	25,5	9/16"	1/4	16
11 5/16 3/8	5/16"	3/8	14	-	13	25	11/16"	1/4	28
11 3/8 1/8	3/8"	1/8	16	-	8,5	28,5	11/16"	3/16	22,5
11 3/8 1/4	3/8"	1/4	16	-	13	32	11/16"	1/4	27
11 3/8 3/8	3/8"	3/8	16	-	13	25,5	11/16"	5/16	25,5
11 3/8 1/2	3/8"	1/2	16	-	17	30,5	7/8"	5/16	56
11 1/2 1/4	1/2"	1/4	20	-	13	34,5	13/16"	5/16	35,5
11 1/2 3/8	1/2"	3/8	20	-	13	29,5	13/16"	3/8	27,5
11 1/2 1/2	1/2"	1/2	20	-	17	30,5	7/8"	3/8	45,5

PN 13

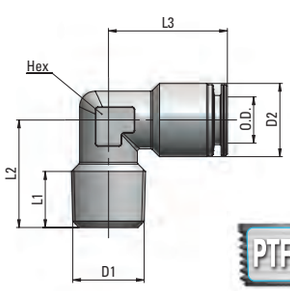
Diritto femmina | Female straight | Union simple femelle | Gerade Aufschraubverschraubung



Type	Tube OD	D1 NPTF	D2	L1	L2	HEX	g
13 5/32 1/8	5/32	1/8	9,5	8,5	25	1/2	11,5
13 1/4 1/8	1/4	1/8	12	8,5	27	1/2	14
13 1/4 1/4	1/4	1/4	12	12	31,5	11/16	26,5
13 5/16 1/8	5/16	1/8	14	8,5	27	9/16	20
13 5/16 1/4	5/16	1/4	14	12	31,5	11/16	28,5
13 3/8 1/4	3/8	1/4	16	12	34	11/16	32,5
13 3/8 3/8	3/8	3/8	16	12,5	34	13/16	37,5
new 13 3/8 1/2	3/8	1/2	16	13,5	37,5	1"	-
new 13 1/2 1/4	1/2	1/4	20	12	34	13/16	-
new 13 1/2 3/8	1/2	3/8	20	12,5	35,5	13/16	-
new 13 1/2 1/2	1/2	1/2	20	13,5	38	1"	-

PN 14

Gomito maschio conico | Taper elbow fitting, male | Raccord à coude mâle conique | Winkelverschraubung, kegelig



PTFE

Type	Tube OD	D1 NPTF	D2	L1	L2	L3	HEX	g
14 5/32 1/8	5/32"	1/8	9,5	8,4	16	17,5	10	9
14 1/4 1/8	1/4"	1/8	12	8,4	16	20,5	10	13
14 1/4 1/4	1/4"	1/4	12	10,9	20	20,5	10	17
14 5/16 1/8	5/16"	1/8	14	8,5	19	22,5	12	20,5
14 5/16 1/4	5/16"	1/4	14	10,7	20,5	22,5	12	22,5
14 3/8 1/4	3/8"	1/4	16	12,2	22,5	25	14	29,5
14 3/8 3/8	3/8"	3/8	16	10,8	22,5	25	14	33,5

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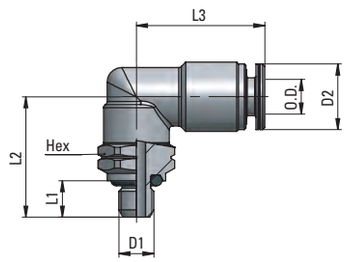
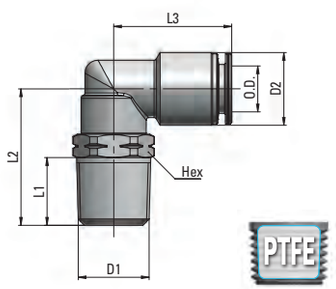
PN 15

Gomito maschio conico girevole | Taper swivelling elbow fitting, male | Raccord à coude tournant, mâle conique | Schwenkbare Winkelverschraubung, kegelig



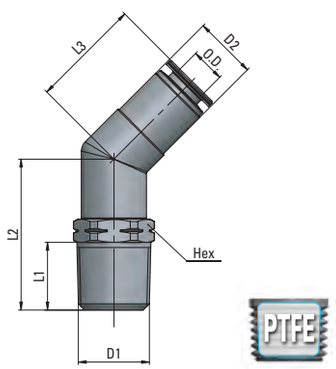


Type	Tube OD	D1 UNF	D2	L1	L2	L3	HEX	g
15 1/8 10-32	1/8	10-32	7	5	16	14,3	5/16	8
15 5/32 10-32	5/32	10-32	9,1	5	16,5	17,5	3/8	10

Type	Tube OD	D1 NPTF	D2	L1	L2	L3	HEX	g
15 1/8 1/8	1/8	1/8	7	8,5	18	14,3	7/16	10,5
15 5/32 1/8	5/32	1/8	9,1	8,5	18,5	17,5	7/16	12,5
15 5/32 1/4	5/32	1/4	9,1	13	26	19	9/16	22,5
15 1/4 1/8	1/4	1/8	12	8,5	21,2	22	1/2	19,5
15 1/4 1/4	1/4	1/4	12	13	26,2	22	9/16	24,5
15 1/4 3/8	1/4	3/8	12	13	26,7	22	11/16	31
15 5/16 1/8	5/16	1/8	14	8,5	21,2	22,5	1/2	23
15 5/16 1/4	5/16	1/4	14	13	26,2	22,5	9/16	27,5
15 5/16 3/8	5/16	3/8	14	13	28,5	23	11/16	40
15 3/8 1/8	3/8	1/8	16	8,5	24	26	11/16	39
15 3/8 1/4	3/8	1/4	16	13	28,5	26	11/16	42,5
15 3/8 3/8	3/8	3/8	16	13	28,5	26	11/16	43,5
15 3/8 1/2	3/8	1/2	16	17	34	26	7/8	62
15 1/2 1/4	1/2	1/4	20	13	32	28,5	13/16	67,5
15 1/2 3/8	1/2	3/8	20	13	32	28,5	13/16	64
15 1/2 1/2	1/2	1/2	20	17	36,5	28,5	7/8	76,5
15 1/2 3/8	1/2"	3/8	20	13	32	28,5	13/16"	64
15 1/2 1/2	1/2"	1/2	20	17	36,5	28,5	7/8"	76,5

PN 15-45°

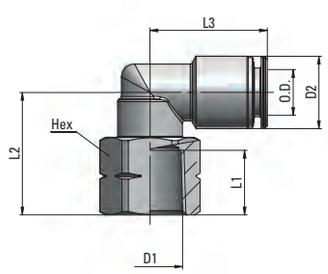
Gomito girevole, maschio 45° | Swivelling elbow fitting, male 45° | Raccord à coude tournant, mâle 45° | Schwenkbare Winkelverschraubung, kegelig, männlich 45°



Type	Tube OD	D1 NPTF	D2	L1	L2	L3	HEX	g
new 15 1/4 1/8 45°	1/4	1/8	12	8,5	23	21	1/2	-
new 15 1/4 1/4 45°	1/4	1/4	12	13	28	21	9/16	-
new 15 3/8 1/4 45°	3/8	1/4	16	13	29	25	11/16	-
new 15 3/8 3/8 45°	3/8	3/8	16	13	29,5	25	11/16	-
new 15 3/8 1/2 45°	3/8	1/2	16	17	35	25	7/8	-
new 15 1/2 3/8 45°	1/2	3/8	20	13	32	27,5	13/16	-
new 15 1/2 1/2 45°	1/2	1/2	20	17	36,5	27,5	7/8	-

PN 17

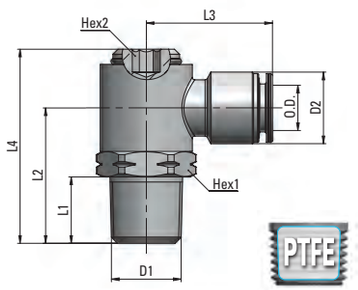
Gomito femmina girevole | Swivelling elbow fitting, female | Raccord à coude tournant femelle | Drehbare Winkel-Aufschraubverschraubung



Type	Tube OD	D1 NPTF	D2	L1	L2	L3	HEX	g
17 5/32 1/8	5/32	1/8	9,1	8,5	19,5	19	9/16	21
new 17 5/32 1/4	5/32	1/4	9	11,5	23,7	21	11/16	-
17 1/4 1/8	1/4	1/8	12	8,5	19,7	22	9/16	22,5
17 1/4 1/4	1/4	1/4	12	11,5	23,7	22	11/16	32
17 5/16 1/8	5/16	1/8	14	8,5	19,7	22,5	9/16	26,5
17 5/16 1/4	5/16	1/4	14	11,5	23,7	22,5	11/16	36,5
17 3/8 1/4	3/8	1/4	16	12	25,5	26	11/16	44,5
17 3/8 3/8	3/8	3/8	16	12	25,5	26	13/16	48,5
new 17 1/2 3/8	1/2	3/8	20	11,5	28	28,5	13/16	-
new 17 1/2 1/2	1/2	1/2	20	13,5	31	28,5	1	-

PN 18

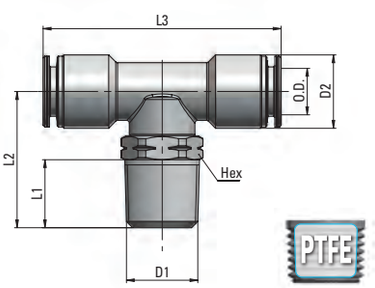
Girevole con anello singolo | Swivelling fitting with banjo ring | Raccord tournant avec banjo | Schwenkverschraubung mit Ringstück



Type	Tube OD	D1 NPTF	D2	L1	L2	L3	L4	HEX1	HEX2	g
18 5/32 1/8	5/32"	1/8	9,1	8,5	20,5	20,5	31	9/16"	1/8"	28,5
18 1/4 1/8	1/4"	1/8	12	8,5	20,5	22,5	31	9/16"	1/8"	30
18 1/4 1/4	1/4"	1/4	12	13	26,5	24	38	11/16"	3/16"	48,5
18 5/16 1/8	5/16"	1/8	14	8,5	20,5	23	31	9/16"	1/8"	30,5
18 5/16 1/4	5/16"	1/4	14	13	26,5	24,5	38	11/16"	3/16"	49,5
18 5/16 3/8	5/16"	3/8	14	13	29	26,5	42	13/16"	1/4"	-
18 3/8 1/4	3/8"	1/4	16	13	26,5	26,5	38	11/16"	3/16"	30,5
18 3/8 3/8	3/8"	3/8	16	13	29	29	42	13/16"	1/4"	84

PN 20

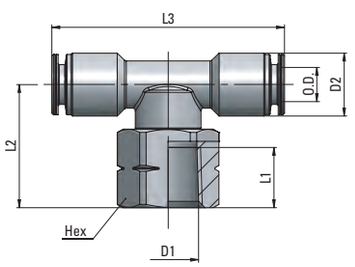
T centrale maschio conico girevole | Swivelling tee fitting, taper | Raccord à té tournant, mâle conique | T-Verschraubung, schwenkbar und kegelig



Type	Tube OD	D1 NPTF	D2	L1	L2	L3	HEX	g
20 1/8 1/8	1/8	1/8	7	8,5	18	28,6	7/16	19,00
20 5/32 1/8	5/32	1/8	9,1	8,5	21	39	1/2	22,00
20 5/32 1/4	5/32	1/4	9,1	13	26	39	9/16	27,00
20 1/4 1/8	1/4	1/8	12	8,5	21	44	1/2	25,50
20 1/4 1/4	1/4	1/4	12	13	26	44	9/16	30,5
new 20 1/4 3/8	1/4	3/8	12	13	26,7	44	11/16	-
20 5/16 1/8	5/16	1/8	14	8,5	21	45	1/2	31,5
20 5/16 1/4	5/16	1/4	14	13	26	45	9/16	37
new 20 3/8 1/8	3/8	1/8	16	8,5	24	52	11/16	-
20 3/8 1/4	3/8	1/4	16	13	28,5	52	11/16	54
20 3/8 3/8	3/8	3/8	16	13	28,5	52	11/16	55
new 20 3/8 1/2	3/8	1/2	16	17	34	52	7/8	-
new 20 1/2 1/4	1/2	1/4	20	13	32	57	13/16	-
20 1/2 3/8	1/2	3/8	20	13	32	57	13/16	78
20 1/2 1/2	1/2	1/2	20	17	36,5	57	7/8	93,5

PN 20-F

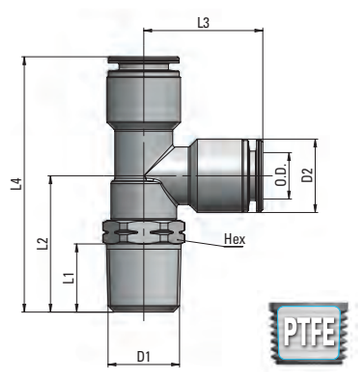
T centrale girevole, femmina | Swivelling tee fitting, female | Raccord à coude tournant, femâle | T-Verschraubung Schwenkbar, weiblich



Type	Tube OD	D1 NPTF	D2	L1	L2	L3	HEX	g
new 20 1/4 1/4 -F	1/4	1/4	12	11,5	23,7	44	11/16	-
new 20 3/8 1/4 -F	3/8	1/4	16	11,5	25,5	52	11/16	-
new 20 3/8 3/8 -F	3/8	3/8	16	11,5	25,5	52	13/16	-
new 20 1/2 3/8 -F	1/2	3/8	20	11,5	28	57	13/16	-
new 20 1/2 1/2 -F	1/2	1/2	20	13,5	31	57	1	-

PN 23

T laterale maschio conico girevole | Lateral run tee fitting, taper | Raccord à té latéral conique, tournant | T-Schwenkverschraubung, kegelig



Type	Tube OD	D1 NPTF	D2	L1	L2	L3	L4	HEX	g
23 1/8 1/8	1/8	1/8	7	8,5	18	14,3	32,3	7/16	19
23 5/32 1/8	5/32	1/8	9,1	8,5	21	19,5	40,5	1/2	23
23 5/32 1/4	5/32	1/4	9,1	13	26	19,5	45,5	9/16	27
23 1/4 1/8	1/4	1/8	12	8,5	21	22	43	1/2	25,5
23 1/4 1/4	1/4	1/4	12	13	26	22	48	9/16	30,5
new 23 1/4 3/8	1/4	3/8	12	13	26,7	22	48,5	11/16	-
23 5/16 1/8	5/16	1/8	14	8,5	21	22,5	43,5	1/2	31,5
23 5/16 1/4	5/16	1/4	14	13	26	22,5	48,5	9/16	37,5
23 3/8 1/4	3/8	1/4	16	13	28,5	26	54,5	11/16	54,3
23 3/8 3/8	3/8	3/8	16	13	28,5	26	54,5	11/16	55
new 23 3/8 1/2	3/8	1/2	16	17	34	26	60	7/8	-
new 23 1/2 1/4	1/2	1/4	20	13	32	28,5	60,5	13/16	-
23 1/2 3/8	1/2	3/8	20	13	32	28,5	60,5	13/16	77,5
23 1/2 1/2	1/2	1/2	20	17	36,5	28,5	65	7/8	90

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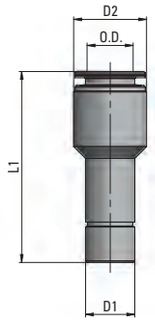
PN 25

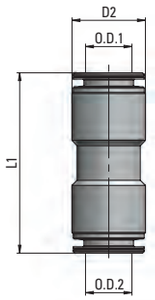
Riduzione | Reducer | Réduction | Reduzierstück



Type	Tube OD	D1	D2	L1	g
25 1/8 5/32	1/8"	5/32"	7	28,1	2,5
25 5/32 1/4	5/32"	1/4"	9,5	31,5	7,5
25 1/4 5/16	1/4"	5/16"	12	34,5	11,5
25 1/4 3/8	1/4"	3/8"	12	34,5	13,5
25 1/4 1/2	1/4"	1/2"	13	34,5	25
25 5/16 3/8	5/16"	3/8"	14	36,5	15,5
25 3/8 1/2	3/8"	1/2"	16	40	24,5

PN 26

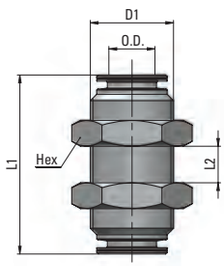
Giunzione intermedia | Union | Union simple égale | Gerade Verbindung



Type	Tube OD1	Tube OD2	D2	L1	g
26 1/8 1/8	1/8"	1/8"	7	23,2	3,2
26 5/32 5/32	5/32"	5/32"	9	28	7,5
26 1/4 1/4	1/4"	1/4"	12	33,6	13,5
26 5/16 5/16	5/16"	5/16"	14	34	18
new 26 3/8 1/4	3/8"	1/4	16	36,6	-
26 3/8 3/8	3/8"	3/8"	16	38,6	25
new 26 1/2 3/8	1/2"	3/8	20	40,5	-
26 1/2 1/2	1/2"	1/2"	20	41	40,9

PN 27

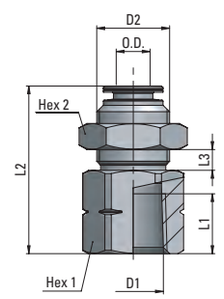
Giunzione intermedia passaparete | Bulkhead union | Union traversée de cloison | Gerade Schottverschraubung



Type	Tube OD	D1	L1	L2	HEX	g
27 1/8 1/8	1/8"	M8x0,75	23,1	7,5	12	13,5
27 5/32 5/32	5/32"	M12x1	28	9,5	16	23
27 1/4 1/4	1/4"	M14x1	34	14,5	18	32,5
27 5/16 5/16	5/16"	M16x1	34	15,5	20	39
27 3/8 3/8	3/8"	M18x1	39	17,5	22	53,5
27 1/2 1/2	1/2"	M22x1,5	41	18,5	26	73,9

PN 27-F

Giunzione intermedia passaparete femmina | Bulkhead union female | Union traversée de cloison femelle | Gerade Schottverschraubung weiblich



Type	Tube OD	D1 NPTF	D2	L1	L2	L3	HEX1	HEX2	g
new 27 5/32 1/4 -F	5/32	1/4	M12x1	11,5	29,5	7	11/16	16	-
new 27 1/4 1/8 -F	1/4	1/8	M14x1	7,5	27	8	11/16	18	-
new 27 1/4 1/4 -F	1/4	1/4	M14x1	11,5	32	8	11/16	18	-
new 27 3/8 1/4 -F	3/8	1/4	M18x1	11,5	34	10	7/8	22	-
new 27 3/8 3/8 -F	3/8	3/8	M18x1	11,5	35	10	7/8	22	-
new 27 3/8 1/2 -F	3/8	1/2	M18x1	13,5	38	10	1	22	-
new 27 1/2 3/8 -F	1/2	3/8	M22x1,5	11,5	36	12	1	24	-
new 27 1/2 1/2 -F	1/2	1/2	M22x1,5	13,5	39	12	1	24	-

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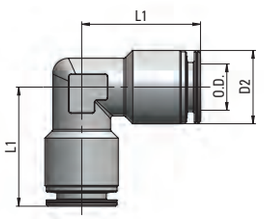
PN 28

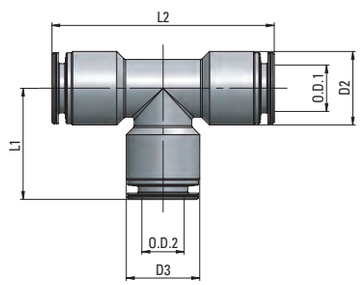
Gomito intermedio | Union elbow | Raccord à coude | Winkelverschraubung



Type	Tube OD	D_2	L_1	g ⚖
28 1/8 1/8	**1/8"**	7	13,1	4,5
28 5/32 5/32	**5/32"**	9	17,5	9,5
28 1/4 1/4	**1/4"**	12	20,5	15,5
28 5/16 5/16	**5/16"**	14	22,5	23,5
28 3/8 3/8	**3/8"**	16	25	32
28 1/2 1/2	**1/2"**	20	27	51,5

PN 29

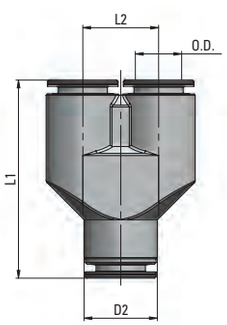
T intermedio | Union tee | T égal | T-Verschraubung



	Type	Tube OD_1	Tube OD_2	D_2	D_3	L_1	L_2	g ⚖
	29 1/8 1/8	**1/8**	**1/8**	7	7	13,1	26,2	5,5
	29 5/32 5/32	**5/32**	**5/32**	9	9	17,5	35	12,5
	29 1/4 1/4	**1/4**	**1/4**	12	12	20	40	20
	29 5/16 5/16	**5/16**	**5/16**	14	14	21	42	28
	29 3/8 3/8	**3/8**	**3/8**	16	16	24,5	49	42,5
new	**29 3/8 1/4**	**3/8**	**1/4**	16	12	22,5	49	-
	29 1/2 1/2	**1/2**	**1/2**	20	20	27	54	69
new	**29 1/2 1/4**	**1/2**	**1/4**	20	12	24,5	54	-
new	**29 1/2 3/8**	**1/2**	**3/8**	20	16	27	54	-

PN 37

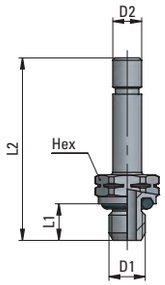
Y | Y fitting | Raccord à Y | Y-Verschraubung



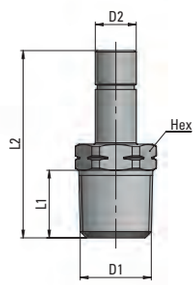
Type	Tube OD	D_2	L_1	L_2	g ⚖
37 1/8 1/8	**1/8"**	6,8	25,6	7,5	19
37 5/32 5/32	**5/32"**	9	29,5	9,5	13,5
37 1/4 1/4	**1/4"**	12	36,5	12,5	30,5
37 5/16 5/16	**5/16"**	14	37,5	14,5	42
37 3/8 3/8	**3/8"**	16	44,5	16,5	68,6

PN 38

Attacco con filetto conico | Stem adaptor | Branchement avec filetage conique | Anschluß mit kegelig Gewinde



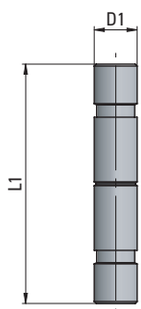
Type	D1 UNF	D2	L1	L2	HEX	g
38 5/32 10-32	**10-32**	**5/32**	5	25	5/16"	2,5



Type	D1 NPTF	D2	L1	L2	HEX	g
38 5/32 1/8	**1/8**	**5/32"**	8,5	29	7/16"	7
38 5/32 1/4	**1/4**	**5/32"**	13	34	9/16"	14
38 1/4 1/8	**1/8**	**1/4"**	8,5	31	7/16"	8,5
38 1/4 1/4	**1/4**	**1/4"**	13	36	9/16"	15
38 5/16 1/8	**1/8**	**5/16"**	8,5	31	7/16"	9
38 5/16 1/4	**1/4**	**5/16"**	13	36	9/16"	15,5
38 3/8 1/4	**1/4**	**3/8"**	13	38	9/16"	16,5
38 3/8 3/8	**3/8**	**3/8"**	13	38,5	11/16"	23
38 1/2 3/8	**3/8**	**1/2"**	13	41,5	11/16"	25,5
38 1/2 1/2	**1/2**	**1/2"**	17	46,5	7/8"	43

PN 39

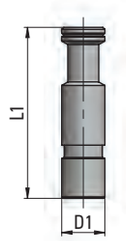
Prolunga | Extention piece | Douille de liaison | Verbindung



Type	D1	L1	g
39 5/32 5/32	**5/32"**	30	2,8
39 1/4 1/4	**1/4"**	35	5
39 5/16 5/16	**5/16"**	35	5,5
39 3/8 3/8	**3/8"**	40	8,5
39 1/2 1/2	**1/2"**	44	14

PN 40

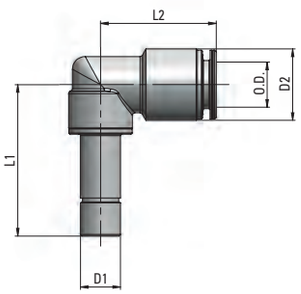
Tappo | Plug | Bouchon | Stopfen



Type	D1	L1	g
40 001/8	**1/8"**	20	1,3
40 00 5/32	**5/32"**	25	2,5
40 00 1/4	**1/4"**	25	4,5
40 00 5/16	**5/16"**	30	12,5
40 00 3/8	**3/8"**	35	20,5
40 00 1/2	**1/2"**	40	42

PN 43

Gomito con codulo | Plug-in elbow | L à broche encliquetable | Winkelverschraubung mit Steckzapfen



Type	Tube OD	D_1	D_2	L_1	L_2	g
43 5/32 5/32	**5/32"**	**5/32"**	9,1	25,7	19,5	13,9
43 1/4 1/4	**1/4"**	**1/4"**	12	29,7	22	17,6
43 5/16 5/16	**5/16"**	**5/16"**	14	29,5	22,5	20,5
43 3/8 3/8	**3/8"**	**3/8"**	16	33,5	26	30,5

PN 10

Cartuccia a pressare

La cartuccia PN10 grazie ad opportuni accorgimenti costruttivi può essere inserita senza alcun problema sia in corpi in plastica che in alluminio ed in ottone pertanto con un'unica versione è possibile far fronte a diverse necessità applicative.

Press-in cartridge

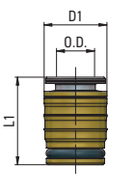
The new construction features of the cartridge PN10 allow for one single cartridge version to be assembled in plastic, aluminium as well as brass bodies.

Cartouche à presser

Grace à de nouvelles caractéristiques de construction, la cartouche PN10 peut être insérée dans des corps en aluminium, en laiton et en plastique.

Einsteckpatrone

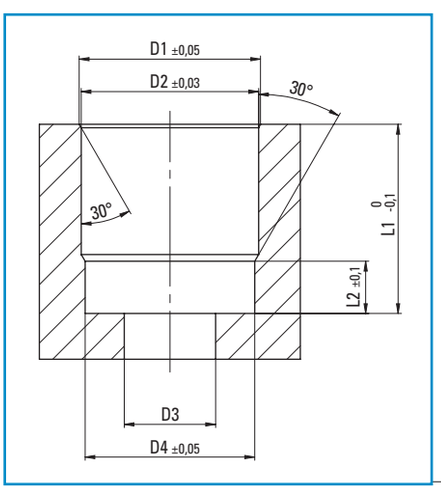
Dank neuen Konstruktionseigenschaften ist die PN10 Einpresspatrone als einzelne Ausführung bei Kunststoff, Messing sowie Aluminiumgehäusen einsetzbar.

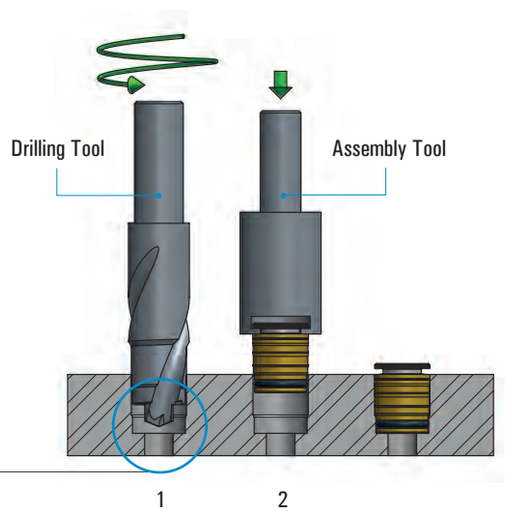


Type	Tube OD	D_1	L_1	g
5/32 OO	**5/32"**	9,3	14,5	3,6
10 1/4 OO	**1/4"**	12	16,5	6
10 5/16 OO	**5/16"**	13,7	17	7,9
10 3/8 OO	**3/8"**	15,3	19	-

Schema di foratura / Cartridge seat drilling plan / Plan de forage des cartouches / Patronensitzbohrungskizze

Tube OD	D_1	D_2	D_3	D_4	L_1	L_2
5/32"	9,5	9,2	3	8,6	12	3,2
1/4"	12,2	11,9	5,5	11,3	14	4
5/16"	13,9	13,6	7	13	14,5	4
3/8"	15,5	15,2	8,5	14,6	16	4





1 Realizzare la sede della cartuccia tramite foratura seguendo le indicazioni fornite

2 Pressare manualmente la cartuccia all'interno della sede realizzata fino ad andare in appoggio sul piano della sede con l'Assembly Tool; così facendo si avrà la certezza di aver effettuato l'inserimento.

"Drilling e Assembly Tool" fornibili su richiesta.

1 Drill the cartridge seat, following the instructions given

2 Manually press the cartridge into the seat and by means of the Assembly tool push it all the way down until it bottoms; this will guarantee the proper cartridge assembly.

"Drilling and Assembly Tool "available upon request.

1 Réaliser le siège de la cartouche selon instructions données

2 Presser la cartouche à la main dans son siège et par l'outil de Montage presser la cartouche jusqu'au fond; comme ça on aura la garantie du montage correct.

"Outil à percer et pour le Montage" disponible sur demande.

1 Der Patronensitz gemäß Anweisungen bohren.

2 Die Patrone manuell in ihr Gehäuse einpressen und mit dem Einpresswerkzeug die Patrone bis zum Anschlag einpressen; damit wird die korrekte Patronenmontage garantiert.

"Bohren und Einpresswerkzeug" auf Anfrage verfügbar.

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PE LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi Automatici Easythread con filettatura “Universale“
Easythread Push-in Fittings,”Uni” thread
Raccords Instantanés Easythread, avec filetage “Uni”
Easythread Steckverschraubungen, “Uni” Gewinde

I

Raccordi Automatici caratterizzati da una filettatura denominata “easyThread” realizzata secondo Standard Cmatic che permette l’accoppiamento con vari standard di filettatura (NPT, BSPP, BSPT); questo si traduce in una maggior flessibilità operativa e in una riduzione dei costi di Magazzino.

GB

Push-in fittings featured by the so called “easyThread” and made according to Cmatic Standards. This thread feature allows for connections with different threads standards (NPT, BSPP, BSPT) and leads to greater operational flexibility and inventory cost reduction.

F

Raccords instantanés caractérisés par le filetage “easyThread” produit selon les standards Cmatic.
Il permet le montage avec divers filetages (NTP, BSPP, BSPT) et donc une plus grande flexibilité opérative et une réduction du coût de magasin.

D

Ein “easyThread” Gewinde gekennzeichnet diese Steckverschraubungsfamilie. Es wird nach Cmatic Normen hergestellt und ermöglicht die Montage mit unterschiedlichen Gewindestandards (NPT, BSPP, BSPT). Vorteil dabei ist eine größere Flexibilität im Betrieb und eine Reduzierung der Lagerkosten.

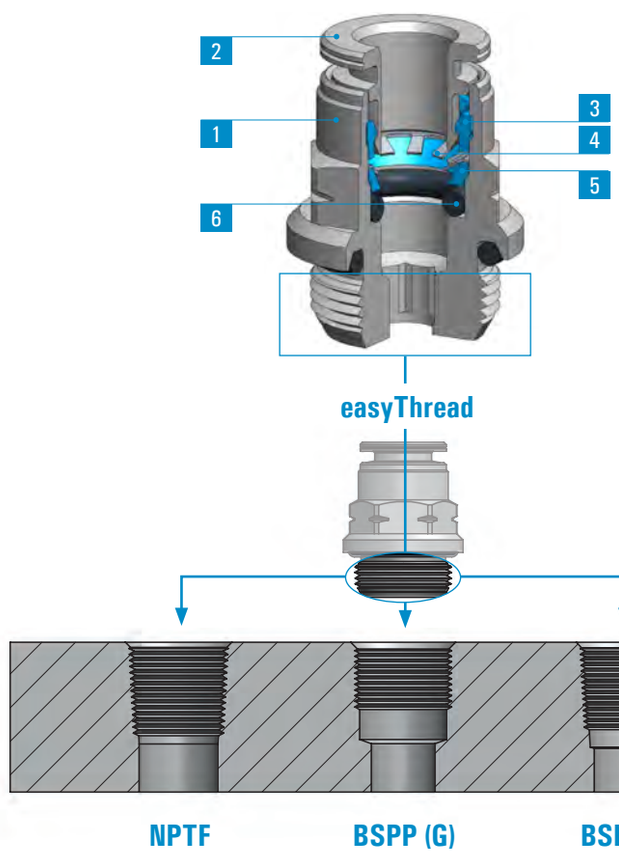
PE

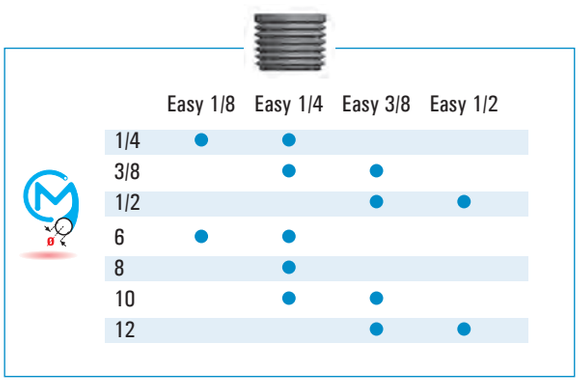
1 - 2	3	4	5	6
Corpo ed Anello Estrattore Body and Release Ring Corps et poussoir Körper und Lösering	Anello di Ritegno Holding Ring Bague de retenue Haltering	Pinza aggraffaggio Gripping ring Pince Spannzange	Anello portapinza Protection Ring Bague protection Schutzring	Guarnizioni Seals Joint d'étancheité Dichtung
Ottone UNI EN 12164 CW614N - UNI EN 12165 CW617N Nichelato Brass UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickel Plated Laiton UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickelé Messing UNI EN 12164 CW614N - UNI EN 12165 CW617N vernickelt	Resina Acetalica (POM) Acetal Resin (POM) Résine acétal (POM) Azetalharz (POM)	Acciaio INOX AISI 301 Stainless steel AISI 301 Acier Inox AISI 301 Edelstahl AISI 301	Resina Acetalica (POM) Acetal Resin (POM) Résine acétal (POM) Azetalharz (POM)	NBR NBR NBR NBR

-20°C ÷ 80°C

Max 20 bar

-99 KPa





SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Polietilene PE,
Poliuretano PU (98 Shore A).
Tolleranze accettabili sui tubi:
+/– 0,07 mm fino a Ø 3/8" - 10 mm
+/– 0,1 mm Ø 1/2" - 12 mm.

Campi di applicazione:
Impianti pneumatici.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyethylene PE,
Polyurethane PU (98 Shore A).
Acceptable Tolerances on the tubings:
+/– 0,07 mm up to Ø 3/8" - 10 mm
+/– 0,1 mm Ø 1/2" - 12 mm.

Application fields:
Pneumatic circuits.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
PA11, PA12, PA6, Polyethylene PE,
Polyurethane PU (98 Shore A).
Tolerances sur les tubes:
+/– 0,07 mm jusqu'au Ø 3/8" - 10 mm
+/– 0,1 mm Ø 1/2" - 12 mm.

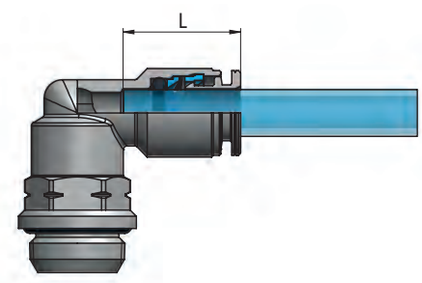
Domaines d'application:
Circuits pneumatiques.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyethylen PE,
Polyurethan PU (98 Shore A).
Schlauchtoleranzen:
+/– 0,07 mm bis Ø 3/8" - 10 mm
+/– 0,1 mm Ø 1/2" - 12 mm.

Anwendungsbereiche:
Pneumatik

Profondità di inserimento del tubo | Tubing insertion depth | Profondeur d'insertion du tube | Schlaucheinstecktiefe



Øe Tube	L
1/4	16,1
3/8	18,3
1/2	19,5
6	16,1
8	16,2
10	18,3
12	19,5

ISTRUZIONI DI MONTAGGIO

1. Tagliare il tubo a 90° (servendosi della pinza tagliatubo TCUT) verificando l'assenza di bave interne ed esterne e facendo attenzione che il tubo non si presenti ovalizzato dopo il taglio.
   In caso di utilizzo di tubo metallico praticare una scanalatura sul tubo mediante apposito apparecchio (TINC). L'esecuzione della scanalatura sul tubo deve essere in funzione del diametro del tubo in modo da permettere il corretto aggraffaggio della pinza di tenuta del raccordo.
2. Inserire il tubo nel raccordo spingendolo fino in battuta.

Estrazione del tubo
Esercitare una leggera pressione sull'anello estrattore, estraendo contemporaneamente il tubo dal corpo del raccordo.

ASSEMBLY INSTRUCTIONS

1. Cut the tube square (by means of a hose cutter i.e. our TCUT) making sure that no burrs are left and that the tube is not oval.
   In case of use with metal hoses, make a groove all around the tube diameter with a suitable tool (TINC).The groove must be made according to the tube diameter so that the fitting collect can better grip onto it.
2. Insert the tube into the fitting until it bottoms.

Tube release
While pressing on the release ring, pull out the tube from the fitting.

INSTRUCTIONS DE MONTAGE

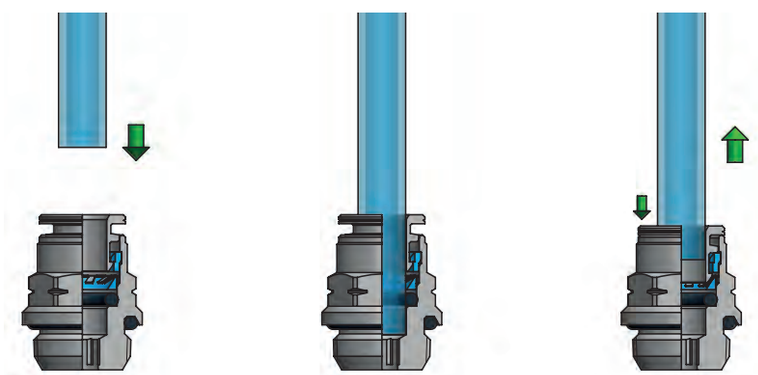
1. Sectionner le tube à 90° par notre coupe tube TCUT en prenant soin de ne par créer des bavures et de ne pas ovaliser le tube.
   Pour l'emploi avec des tubes en métal, pratiquer une rainure le long du diamètre du tube par un outil adéquat pour l'usage (TINC). La rainure devra toujours être en fonction du diamètre du tube, pour que la pince puisse bien l'agrafer.
2. Pousser le tube jusqu' au fond du raccord.

Débranchement du tube
Appuyer sur le poussoir en métal et tirer simultanément sur le tube.

MONTAGEANWEISUNGEN

1. Schlauch mittels unserer Schlauchschere (TCUT) 90° abschneiden und entgraten. Bei Montage mit Metallrohren, eine Nut um den Rohrdurchmesser herum mit dem dazu geeigneten Werkzeug machen (TINC). Die Nut muss im Verhältnis zu dem Rohrdurch messer stehen, damit die Spannange gut daran klammern kann.
2. Darauf achten, daß der Schlauch danach nicht oval gequetscht ist und dann ihn is zum Verschraubungsanschlag einstecken.

Schlauchlösen
Auf den Druckring drücken und gleichzeitig den Schlauch rausziehen.



Effettuato il collegamento, assicurarsi che il tubo inserito nel raccordo non sia sottoposto ad alcuna forza di trazione; è necessario inoltre rispettare durante il collegamento del tubo il raggio minimo di curvatura consigliato così come riportato nella sezione tubi di questo catalogo tecnico (vedi pag. 363)
Al fine di evitare lo sgancio involontario del tubo nessun oggetto deve venire a contatto con l'anello estrattore del raccordo evitando così l'esercizio di qualsiasi forza indesiderata, anche solo laterale, che potrebbe causare la pressione dell'anello estrattore e conseguente rilascio del tubo.
Per il serraggio delle parti filettate del raccordo si raccomanda di attenersi alle coppie consigliate riportate a pag.6

Once the tubing is connected to the fitting, make sure that the tubing is not subject to any tensile strength and that the min. recommended bending radius stated in the tubing section of this catalogue is complied with (see page 363).
To prevent any accidental tube release, no components have to come in touch with the release ring and exercise any unwanted pressure on the same. Indeed however lateral, any load on the release ring may cause the tube disconnection.
To tighten threads, please check out our tightening torque chart illustrated at page 6.

Une fois effectué le branchement, s'assurer que le tube inséré dans le raccord n'est soumis à aucune force de traction. Egalement, il est nécessaire de respecter, lors du branchement du tube, le rayon minimum de courbure conseillé dans la section tubes de ce catalogue technique (voir la page 363).
Afin d'éviter le décrochage involontaire du tube, aucun objet ne doit entrer en contact avec la bague d'extraction du raccord, empêchant ainsi l'exercice de toute force indésirable, ne serait-ce que latérale, qui pourrait provoquer la pression de la bague d'extraction et donc le relâchement du tube.
Pour le serrage des parties filetées du raccord, il est recommandé de s'en tenir aux couples de serrage conseillés et reportés à la page 6.

Nach der Schlauchverbindung, sicherstellen, dass der in die Verschraubung eingeführte Schlauch keinen Zugbelastungen ausgesetzt ist; beim Anschluss des Schlauchs muss der empfohlene Mindestbiegeradius eingehalten werden, gemäß den in diesem technischen Katalog im Schlauchabschnitt, angegebenen Hinweisen (siehe Seite 363).
Um das versehentliche Lösen des Schlauchs zu verhindern, darf kein Gegenstand den Lösering der Verschraubung berühren. Keine unerwünschte Kraft darf auch nicht seitlich einwirken und kein Druck soll auf den Lösering ausgeübt werden, denn dies das Schlauchlösen verursachen könnte.
Zum Festziehen der Gewinde sich an den, auf Seite 6, empfohlenen Drehmomente einhalten.

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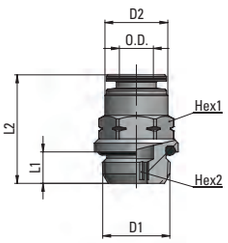
PE 12

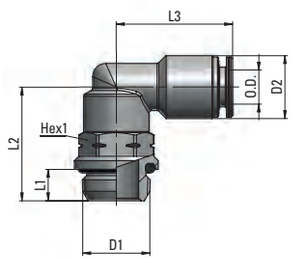
Diritto maschio "EasyThread" | "EasyThread" straight, male | Union simple male "EasyThread" | Gerade Einschraubverschraubung, "EasyThread"



Type	Tube OD	D1	D2	L1	L2	HEX1	HEX2	g
12 1/4 1/8	1/4	Easy 1/8	12	4,5	20,5	1/2	5/32	9,4
12 1/4 1/4	1/4	Easy 1/4	12	6	20,5	1/2	5/32	12,8
12 3/8 1/4	3/8	Easy 1/4	15,7	6	26,5	5/8	1/4	19,7
12 3/8 3/8	3/8	Easy 3/8	15,7	6	25	5/8	1/4	24,1
12 1/2 3/8	1/2	Easy 3/8	20	6	28	13/16	13/32	32,2
12 1/2 1/2	1/2	Easy 1/2	20	8,5	26,5	13/16	13/32	35,6
12 06 1/8	6	Easy 1/8	11,7	4,5	19,5	12	4	9,3
12 06 1/4	6	Easy 1/4	11,7	6	19,5	12	4	12,1
12 08 1/4	8	Easy 1/4	13,7	6	21,5	14	6	33,7
12 10 1/4	10	Easy 1/4	15,8	6	27	15	8	16,1
12 10 3/8	10	Easy 3/8	15,8	6	24	16	8	20,3
12 12 3/8	12	Easy 3/8	18,8	6	27,5	19	10	27,9
12 12 1/2	12	Easy 1/2	18,8	8,5	26,5	19	10	35,2

PE 16

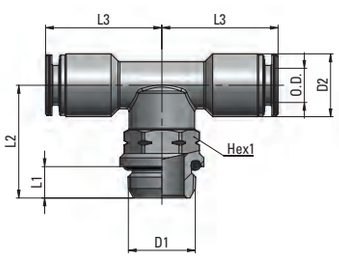
Gomito maschio girevole "EasyThread" | "EasyThread" swivelling elbow fitting, male | Raccord à coude tournant, mâle "EasyThread" | Schwenkbare Winkelverschraubung, "Easy Thread"



Type	Tube OD	D1	D2	L1	L2	L3	HEX1	g
16 1/4 1/8	1/4	Easy 1/8	12	4,5	18,2	22	1/2	18,1
16 1/4 1/4	1/4	Easy 1/4	12	6	21,7	22	1/2	20,9
16 3/8 1/4	3/8	Easy 1/4	16	6	22	26	5/8	33,4
16 3/8 3/8	3/8	Easy 3/8	16	6	25	26	5/8	38,4
16 1/2 3/8	1/2	Easy 3/8	20	6	25,5	28,5	13/16	57,8
16 1/2 1/2	1/2	Easy 1/2	20	8,5	32,5	28,5	13/16	69,50
16 06 1/8	6	Easy 1/8	12	4,5	18,2	22	1/2	18,3
16 06 1/4	6	Easy 1/4	12	6	21,7	22	1/2	21,6
16 08 1/4	8	Easy 1/4	14	6	21,5	22,5	1/2	24,8
16 10 1/4	10	Easy 1/4	16	6	22	26	5/8	31,7
16 10 3/8	10	Easy 3/8	16	6	25	26	5/8	36,7
16 12 3/8	12	Easy 3/8	19	6	25,5	28,5	13/16	56
16 12 1/2	12	Easy 1/2	19	8,5	32,5	28,5	13/16	69

PE 21

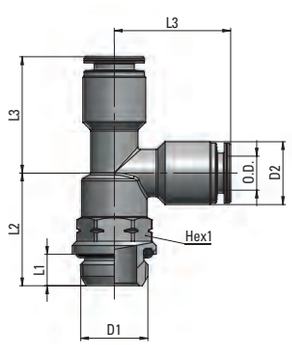
T centrale maschio girevole "EasyThread" | "EasyThread" swivelling tee fitting | Raccord à té tournant, mâle "EasyThread" | T-Verschraubung, schwenkbar und "EasyThread"



Type	Tube OD	D1	D2	L1	L2	L3	HEX1	g
21 1/4 1/8	1/4	Easy 1/8	12	4,5	18	22	1/2	24,30
21 1/4 1/4	1/4	Easy 1/4	12	6	21,5	22	1/2	27,8
21 3/8 1/4	3/8	Easy 1/4	16	6	22	26	5/8	45,7
21 3/8 3/8	3/8	Easy 3/8	16	6	25	26	5/8	50,6
21 1/2 3/8	1/2	Easy 3/8	20	6	25,5	28,5	13/16	75
21 1/2 1/2	1/2	Easy 1/2	20	8,5	32,5	28,5	13/16	86,9
21 06 1/8	6	Easy 1/8	12	4,5	18	22	1/2	24,9
21 06 1/4	6	Easy 1/4	12	6	21,5	22	1/2	27,8
21 08 1/4	8	Easy 1/4	14	6	21,5	22,5	1/2	-
21 10 1/4	10	Easy 1/4	16	6	22	26	5/8	43,3
21 10 3/8	10	Easy 3/8	16	6	25	26	5/8	48,6
21 12 3/8	12	Easy 3/8	19	6	25,5	28,5	13/16	74
21 12 1/2	12	Easy 1/2	19	8,5	32,5	28,5	13/16	86,7

PE 24

T laterale maschio girevole "EasyThread" | "EasyThread" lateral run tee fitting | Raccord à té latéral tournant "EasyThread" | T-Schwenkverschraubung, "EasyThread"



Type	Tube OD	D1	D2	L1	L2	L3	HEX1	g
24 1/4 1/8	1/4	Easy 1/8	12	4,5	18,2	22	1/2	25
24 1/4 1/4	1/4	Easy 1/4	12	6	21,7	22	1/2	27,8
24 3/8 1/4	3/8	Easy 1/4	16	6	22	26	5/8	45,2
24 3/8 3/8	3/8	Easy 3/8	16	6	25	26	5/8	50,8
24 1/2 3/8	1/2	Easy 3/8	20	6	25,5	28,5	13/16	73,2
24 1/2 1/2	1/2	Easy 1/2	20	8,5	32,5	28,5	13/16	85
24 06 1/8	6	Easy 1/8	12	4,5	18	22	1/2	26,1
24 06 1/4	6	Easy 1/4	12	6	21,5	22	1/2	29,2
24 08 1/4	8	Easy 1/4	14	6	21,5	22,5	1/2	33,1
24 10 1/4	10	Easy 1/4	16	6	22	26	5/8	43,5
24 10 3/8	10	Easy 3/8	16	6	25	26	5/8	48,5
24 12 3/8	12	Easy 3/8	19	6	25,5	28,5	13/16	63,1
24 12 1/2	12	Easy 1/2	19	8,5	32,5	28,5	13/16	76

AV LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi Automatici in Ottone per applicazioni Food e High Performance

Brass Push-in Fittings for Food and High Performance Applications

Raccords Instantanés en Laiton pour Applications Alimentaires et Hautes Performances

Steckanschlüsse aus Messing für Lebensmittel-und Hochleistungsanwendungen

NSF COMPONENT

D

I raccordi automatici della serie AV sono realizzati in ottone, nichelato chimicamente. Questa famiglia di prodotti è certificata NSF 169 ed è il prodotto giusto per l'industria alimentare e chimica, grazie ad una buona resistenza agli ambienti corrosivi e qualsiasi applicazione ad alta temperatura.
Tutti i raccordi della serie AV vengono sottoposti a trattamento superficiale di Nichelatura chimica certificata NSF 51.

The push-in Fittings of the AV line are made of brass, chemical nickel plated. This product family is NSF 169 certified and as such the right product for the food and chemical industry, with a good resistance in corrosive environments and any high temperature applications.
All AV fittings are made of brass and are chemical nickel-plated certified NSF 51.

Les raccords instantanés de la gamme AV sont en laiton nickelé chimique. Cette famille de produits est certifiée NSF 169 et en tant que telle le bon produit pour l'industrie alimentaire et chimique, avec une bonne résistance dans des environnements corrosifs et toutes applications à haute température.
Les raccords de la série AV sont en laiton et soumis au traitement de nickelage chimique certifié NSF 51.

Die Steckanschlüsse der AV-Linie bestehen aus Messing, chemisch vernickelt. Diese Produktfamilie ist NSF 169-zertifiziert und als solches das richtige Produkt für die Lebensmittel- und chemische Industrie mit einer guten Beständigkeit in korrosiven Umgebungen und bei Hochtemperaturanwendungen.
Die AV Verschraubungen sind aus Messing, chemisch vernickelt zertifiziert NSF 51.

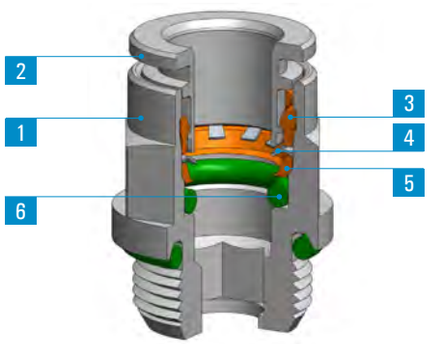
AV

1 - 2	3	4	5	6
Corpo ed Anello Estrattore Body and Release Ring Corps et poussoir Körper und Lösering	Anello di Ritegno Holding Ring Bague de retenue Haltering	Pinza aggraffaggio Gripping ring Pince Spannzange	Anello portapinza Protection Ring Bague protection Schutzring	Guarnizioni Seals Joint d'étancheité Dichtung
Ottone UNI EN 12164 CW614N - UNI EN 12165 CW617N Nichelato chimicamente Brass UNI EN 12164 CW614N - UNI EN 12165 CW617N chemical Nickel Plated Laiton UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickelage chimique Messing UNI EN 12164 CW614N - UNI EN 12165 CW617N chemish vernickelt	Resina (PEI) Resin (PEI) Résine (PEI) Harz (PEI)	Acciaio INOX AISI 301 Stainless steel AISI 301 Acier Inox AISI 301 Edelstahl AISI 301	Resina (PEI) Resin (PEI) Résine (PEI) Harz (PEI)	FPM conforme FDA FPM compliant with FDA FPM conforme à FDA FPM, FDA konform

-20°C ÷ 150°C

Max 20 bar

-99 KPa



	M5x0,8	1/8	1/4	3/8	1/2
4	●	●	●		
6	●	●	●		
8		●	●	●	
10			●	●	●
12				●	●

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Polietilene PE, Poliuretano PU (98 Shore A).
Tolleranze accettabili sui tubi:
+/– 0,07 mm fino a Ø 10 mm
+/– 0,1 mm da Ø 12 a Ø 14 mm.

Campi di applicazione:
Impianti pneumatici.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyethylene PE, Polyurethane PU (98 Shore A).
Acceptable Tolerances on the tubings:
+/– 0,07 mm up to Ø 10 mm
+/– 0,1 mm from Ø 12 up to Ø 14 mm.

Application fields:
Pneumatic circuits.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
PA11, PA12, PA6, Polyethylene PE, Polyurethane PU (98 Shore A).
Tolerances sur les tubes:
+/– 0,07 mm jusqu'au Ø 10 mm
+/– 0,1 mm de Ø 12 jusqu'au Ø 14 mm.

Domaines d'application:
Circuits pneumatiques.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyethylen PE, Polyurethan PU (98 Shore A).
Schlauchtoleranzen:
+/– 0,07 mm bis Ø 10 mm
+/– 0,1 mm von Ø 12 bis Ø 14 mm.

Anwendungsbereiche:
Pneumatik

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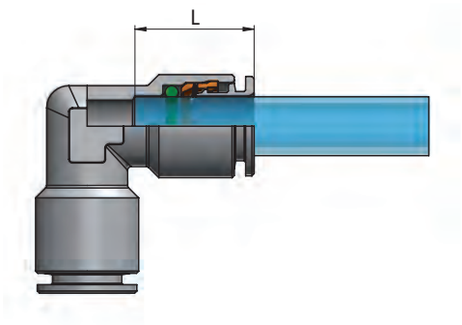
Profondità di inserimento del tubo | Tubing insertion depth | Profondeur d'insertion du tube | Schlaucheinstecktiefe



Øe Tubo	L
4	13.2
6	16.1
8	16.2
10	18.3
12	19.5

ISTRUZIONI DI MONTAGGIO

1. Tagliare il tubo a 90° (servendosi della pinza tagliatubo TCUT) verificando l'assenza di bave interne ed esterne e facendo attenzione che il tubo non si presenti ovalizzato dopo il taglio.
   In caso di utilizzo di tubo metallico praticare una scanalatura sul tubo mediante apposito apparecchio (TINC). L'esecuzione della scanalatura sul tubo deve essere in funzione del diametro del tubo in modo da permettere il corretto aggraffaggio della pinza di tenuta del raccordo.
2. Inserire il tubo nel raccordo spingendolo fino in battuta.

Estrazione del tubo
Esercitare una leggera pressione sull'anello estrattore, estraendo contemporaneamente il tubo dal corpo del raccordo.

ASSEMBLY INSTRUCTIONS

1. Cut the tube square (by means of a hose cutter i.e. our TCUT) making sure that no burrs are left and that the tube is not oval.
   In case of use with metal hoses, make a groove all around the tube diameter with a suitable tool (TINC).The groove must be made according to the tube diameter so that the fitting collect can better grip onto it.
2. Insert the tube into the fitting until it bottoms.

Tube release
While pressing on the release ring, pull out the tube from the fitting.

INSTRUCTIONS DE MONTAGE

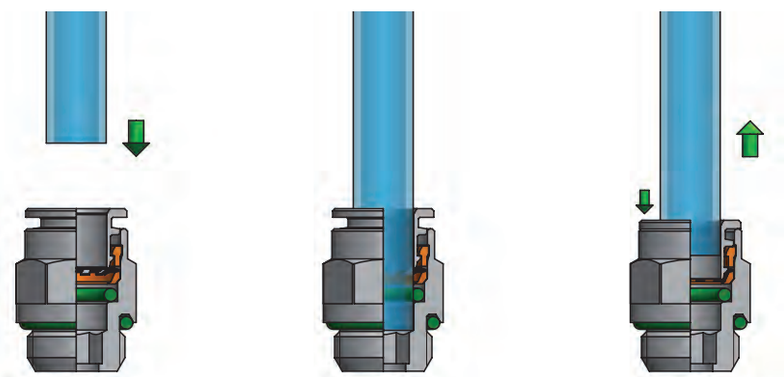
1. Sectionner le tube à 90° par notre coupe tube TCUT en prenant soin de ne par créer des bavures et de ne pas ovaliser le tube.
   Pour l'emploi avec des tubes en métal, pratiquer une rainure le long du diamètre du tube par un outil adéquat pour l'usage (TINC). La rainure devra toujours être en fonction du diamètre du tube, pour que la pince puisse bien l'agrafer.
2. Pousser le tube jusqu' au fond du raccord.

Débranchement du tube
Appuyer sur le poussoir en métal et tirer simultanément sur le tube.

MONTAGEANWEISUNGEN

1. Schlauch mittels unserer Schlauchschere (TCUT) 90° abschneiden und entgraten. Bei Montage mit Metallrohren, eine Nut um den Rohrdurchmesser herum mit dem dazu geeigneten Werkzeug machen (TINC). Die Nut muss im Verhältnis zu dem Rohrdurch messer stehen, damit die Spannange gut daran klammern kann.
2. Darauf achten, daß der Schlauch danach nicht oval gequetscht ist und dann ihn is zum Verschraubungsanschlag einstecken.

Schlauchlösen
Auf den Druckring drücken und gleichzeitig den Schlauch rausziehen.



Effettuato il collegamento, assicurarsi che il tubo inserito nel raccordo non sia sottoposto ad alcuna forza di trazione; è necessario inoltre rispettare durante il collegamento del tubo il raggio minimo di curvatura consigliato così come riportato nella sezione tubi di questo catalogo tecnico (vedi pag. 363)
Al fine di evitare lo sgancio involontario del tubo nessun oggetto deve venire a contatto con l'anello estrattore del raccordo evitando così l'esercizio di qualsiasi forza indesiderata, anche solo laterale, che potrebbe causare la pressione dell'anello estrattore e conseguente rilascio del tubo.
Per il serraggio delle parti filettate del raccordo si raccomanda di attenersi alle coppie consigliate riportate a pag.6

Once the tubing is connected to the fitting, make sure that the tubing is not subject to any tensile strength and that the min. recommended bending radius stated in the tubing section of this catalogue is complied with (see page 363).
To prevent any accidental tube release, no components have to come in touch with the release ring and exercise any unwanted pressure on the same. Indeed however lateral, any load on the release ring may cause the tube disconnection.
To tighten threads, please check out our tightening torque chart illustrated at page 6.

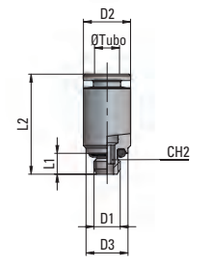
Une fois effectué le branchement, s'assurer que le tube inséré dans le raccord n'est soumis à aucune force de traction. Egalement, il est nécessaire de respecter, lors du branchement du tube, le rayon minimum de courbure conseillé dans la section tubes de ce catalogue technique (voir la page 363).
Afin d'éviter le décrochage involontaire du tube, aucun objet ne doit entrer en contact avec la bague d'extraction du raccord, empêchant ainsi l'exercice de toute force indésirable, ne serait-ce que latérale, qui pourrait provoquer la pression de la bague d'extraction et donc le relâchement du tube.
Pour le serrage des parties filetées du raccord, il est recommandé de s'en tenir aux couples de serrage conseillés et reportés à la page 6.

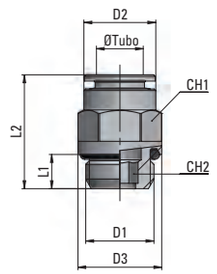
Nach der Schlauchverbindung, sicherstellen, dass der in die Verschraubung eingeführte Schlauch keinen Zugbelastungen ausgesetzt ist; beim Anschluss des Schlauchs muss der empfohlene Mindestbiegeradius eingehalten werden, gemäß den in diesem technischen Katalog im Schlauchabschnitt, angegebenen Hinweisen (siehe Seite 363).
Um das versehentliche Lösen des Schlauchs zu verhindern, darf kein Gegenstand den Lösering der Verschraubung berühren. Keine unerwünschte Kraft darf auch nicht seitlich einwirken und kein Druck soll auf den Lösering ausgeübt werden, denn dies das Schlauchlösen verursachen könnte.
Zum Festziehen der Gewinde sich an den, auf Seite 6, empfohlenen Drehmomente einhalten.

trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

AV 12

Diritto maschio cilindrico | Parallel straight, male | Union simple mâle cylindrique | Gerade Einschraubverschraubung, zylindrisch



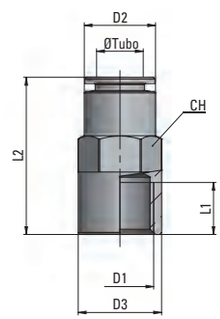


Type	Ø Tubo	D1	D2	D3	L1	L2	CH1	CH2	g
12 04 M5	**4**	**M5x0,8**	9	8	4	19	-	2,5	4
12 06 M5	**6**	**M5x0,8**	12	8	4	22,2	-	2,5	8,5

Type	Ø Tubo	D1	D2	D3	L1	L2	CH1	CH2	g
12 04 18	**4**	**G1/8**	9	13	5	16,5	9	3	6
12 04 14	**4**	**G1/4**	9	16	6,5	18,5	9	3	12
12 06 18	**6**	**G1/8**	11,9	13,5	5	19,5	12	4	9
12 06 14	**6**	**G1/4**	11,9	16	6,5	19,5	12	4	12,5
12 08 18	**8**	**G1/8**	13,9	14,5	5	23,5	13	6	11
12 08 14	**8**	**G1/4**	13,9	16	6,5	21,5	14	6	14
12 08 38	**8**	**G3/8**	13,9	20	7	21	14	6	20
12 10 14	**10**	**G1/4**	15,9	16	6,5	27,5	15	8	18
12 10 38	**10**	**G3/8**	15,9	20	7	25	16	8	23
12 10 12	**10**	**G1/2**	15,9	25	8,5	25,5	16	8	34,5
12 12 14	**12**	**G1/4**	18,9	21	6,5	28,5	19	8	22
12 12 38	**12**	**G3/8**	18,9	21	7	28,5	19	10	25
12 12 12	**12**	**G1/2**	18,9	25	8,5	26,5	19	10	33

AV 13

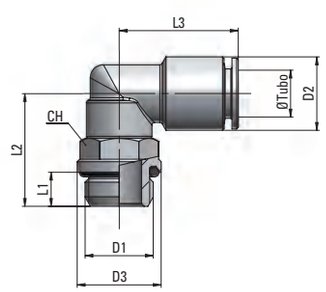
Diritto femmina | Female straight | Union simple femelle | Gerade Aufschraubverschraubung



Type	Ø Tubo	D1	D2	D3	L1	L2	CH	g
13 04 18	**4**	**G1/8**	9	13	7	23,5	9	10
13 06 18	**6**	**G1/8**	11,9	14	7	26	12	15
13 06 14	**6**	**G1/4**	11,9	16	10	30	12	19
13 08 18	**8**	**G1/8**	13,7	16,2	7	26	14	18
13 08 14	**8**	**G1/4**	13,9	16	10	30	14	22
13 10 14	**10**	**G1/4**	15,9	18,5	10	32	16	24,4

AV 16

Gomito maschio cilindrico girevole | Parallel swivelling elbow fitting, male | Raccord à coude tournant, mâle cylindrique | Schwenkbare Winkelverschraubung, zylindrisch



Type	Ø Tubo	D1	D2	D3	L1	L2	L3	CH	g
16 04 M5	**4**	**M5x0,8**	9,1	10	4	14	17,5	9	8,5
16 04 18	**4**	**G1/8**	9,1	14,5	5	18,2	19,5	13	16
16 04 14	**4**	**G1/4**	9,1	16	6,5	21,7	19,5	13	19,5
16 06 M5	**6**	**M5x0,8**	12	10	4	14	20,5	9	12
16 06 18	**6**	**G1/8**	12	14,5	5	18,2	22	13	19
16 06 14	**6**	**G1/4**	12	16	6,5	21,7	22	13	22
16 08 18	**8**	**G1/8**	14	14,5	5	18	22,5	13	22
16 08 14	**8**	**G1/4**	14	16	6,5	21,5	22,5	13	24
16 08 38	**8**	**G3/8**	14	20	7	25,5	23	16	36,5
16 10 14	**10**	**G1/4**	16	18	6,5	22	26	16	33
16 10 38	**10**	**G3/8**	16	20	7	25,5	26	16	38
16 10 12	**10**	**G1/2**	16	25	8,5	27,5	26	16	43,2
16 12 14	**12**	**G1/4**	19	22,5	6,5	25,5	28,5	20	56,5
16 12 38	**12**	**G3/8**	19	22,5	7	26	28,5	20	55,5
16 12 12	**12**	**G1/2**	19	25	8,5	30,5	28,5	20	63

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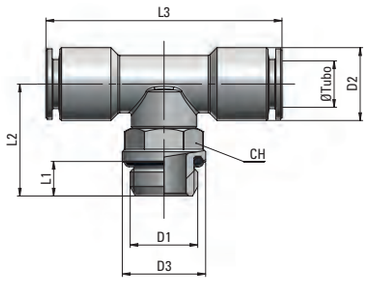
AV 21

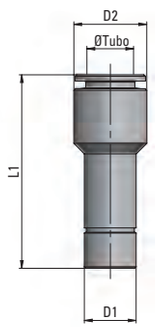
T centrale maschio cilindrico girevole | Swivelling tee fitting, parallel | Raccord à té tournant, mâle cylindrique | T-Verschraubung, schwenkbar und zylindrisch



	Type	Ø Tubo	D1	D2	D3	L1	L2	L3	CH	g
new	21 04 18	4	G1/8	9,1	14,5	5	18,2	39	13	20,7
new	21 04 14	4	G1/4	9,1	16	6,5	21,7	39	13	23,9
new	21 06 18	6	G1/8	12	14,5	5	18	44	13	25,2
new	21 06 14	6	G1/4	12	16	6,5	21,5	44	13	30
new	21 08 18	8	G1/8	14	14,5	5	18	45	13	30,7
new	21 08 14	8	G1/4	14	16	6,5	21,5	45	13	34,1
new	21 08 38	8	G3/8	14	20	7	25,5	46	16	46,7
new	21 10 14	10	G1/4	16	18	6,5	22	52	16	44,4
new	21 10 38	10	G3/8	16	20	7	25,5	52	16	50,1
new	21 12 38	12	G3/8	19	22,5	7	26	57	20	75,9
new	21 12 12	12	G1/2	19	25	8,5	30,5	57	20	84,2

AV 25

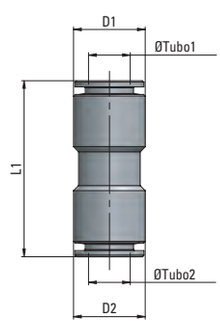
Riduzione | Reducer | Réduction | Reduzierstück



Type	Ø Tubo	D1	D2	L1	g
25 04 06	4	6	9	33,5	7
25 06 08	6	8	12	35	11,5
25 08 10	8	10	14	37	15
25 10 12	10	12	16	42	20,3

AV 26

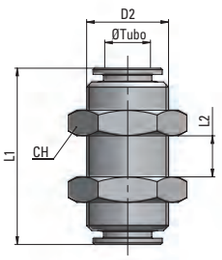
Giunzione intermedia | Union | Union simple égale | Gerade Verbindung



Type	Ø Tubo1	Ø Tubo2	D1	D2	L1	g
26 04 04	4	4	9	9	28	6,5
26 06 06	6	6	12	12	33,6	14,6
26 06 04	6	4	12	12	31	14,7
26 08 08	8	8	14	14	34	17,5
26 08 06	8	6	14	14	34	21
26 10 10	10	10	16	16	38,6	22,5
26 10 08	10	8	16	16	36,5	25,2
26 12 12	12	12	19	19	41	25,5

AV 27

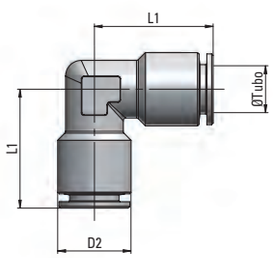
Giunzione intermedia passaparete | Bulkhead union | Union traversée de cloison | Gerade Schottverschraubung



Type	Ø Tubo	D2	L1	L2	CH	g
27 04 04	**4**	M12x1	28	11	16	24
27 06 06	**6**	M14x1	34	16	18	34,5
27 08 08	**8**	M16x1	34	16	20	40
27 10 10	**10**	M18x1	39	19	22	51
27 12 12	**12**	M20x1	41	20	24	59,5

AV 28

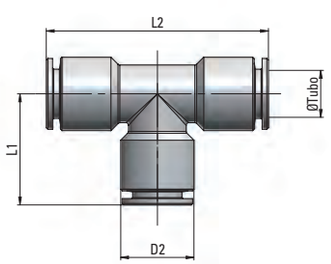
Gomito intermedio | Union elbow | Raccord à coude | Winkelverschraubung



Type	Ø Tubo	D2	L1	g
28 04 04	**4**	**9**	17,5	8,5
28 06 06	**6**	**12**	20,5	16,5
28 08 08	**8**	**14**	22,5	22,5
28 10 10	**10**	**16**	25	28,5
28 12 12	**12**	**19**	26,5	43,5

AV 29

T intermedio | Union tee | T égal | T-Verschraubung



Type	Ø Tubo	D2	L1	L2	g
29 04 04	**4**	**9**	17,5	35	11
29 06 06	**6**	**12**	20	40	22
29 08 08	**8**	**14**	21	42	28
29 10 10	**10**	**16**	24,5	49	37,5
29 12 12	**12**	**19**	26	52	53

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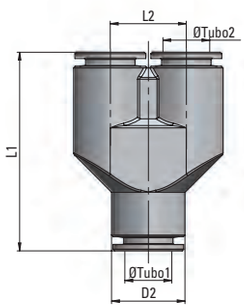
AV 37

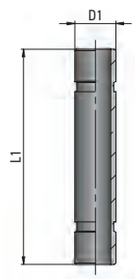
Y | Y fitting | Raccord à Y | Y-Verschraubung



Type	Ø Tubo1	Ø Tubo2	D2	L1	L2	g
37 04 04	4	4	9	29,5	9,5	13,5
37 06 06	6	6	12	36,5	12,5	32
37 08 08	8	8	14	37,5	14,5	42,5
37 10 10	10	10	16	44,5	16,5	62,7
37 12 12	12	12	19	49	19,5	95,8

AV 39

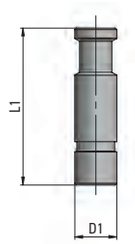
Prolunga | Extention piece | Douille de liaison | Verbindung



	Type	D1	L1	g
new	39 04 04	4	35	2,8
new	39 06 06	6	40	5,5
new	39 08 08	8	42	7,5
new	39 10 10	10	50	11
new	39 12 12	12	53	14
new	39 14 14	14	54	18,5

AV 40

Tappo | Plug | Bouchon | Stopfen



	Type	D1	L1	g
new	40 00 04	4	25	2,5
new	40 00 06	6	25	5,5
new	40 00 08	8	30	12,5
new	40 00 10	10	35	23
new	40 00 12	12	40	37,5

MF LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi Automatici per Applicazioni Food and Beverage
Push-in Fittings for Food and Beverage Applications
Raccords instantanés pour le domaine alimentaire et des boissons
Steckverschraubungen für Lebensmittel-und Getränkeanwendungen

NSF COMPONENT

I

MF è il Raccordo Automatico studiato e certificato per applicazioni Food and Beverage.
Completamente realizzato in ottone a basso contenuto di piombo, il raccordo della serie MF è certificato NSF secondo lo standard 169 per il contatto con acqua, the e caffè; risulta pertanto la soluzione ottimale per l'industria delle macchine del caffè e del vending.
Completa le certificazioni del raccordo serie MF anche la conformità secondo lo standard NSF/ANSI 372 che garantisce la rispondenza dell'ottone ai tenori di piombo massimi concessi per il contatto con acqua potabile (U.S.Safe Drinking Water Act).

GB

MF is a push-to-connect fitting designed and certified for Food and Beverage applications.
MF fitting is made of brass with low lead content and it is NSF certified according to the 169 standards for contact with water, tea and coffee. This makes MF fitting The Right Solution for the coffee and vending machines industry.
On top of the 169 NSF/ANSI Certificate, the MF fitting boasts also the NSF/ANSI 372 brass compliance with the maximum lead content standards allowed for contact with drinking water (U.S. Safe Drinking Water Act).

F

MF est la connexion automatique conçue et certifiée pour les applications alimentaires et de boissons.
Entièrement en laiton à faible teneur en plomb, le raccord série MF est certifié NSF selon la norme 169 pour le contact avec l'eau, le thé et le café; c'est donc la solution optimale pour l'industrie du café et des distributeurs automatiques.
La certification des raccords de la série MF est également conforme à la norme NSF/ANSI 372 qui garantit la conformité du laiton aux niveaux maximum de plomb autorisés pour le contact avec l'eau potable (U.S.Safe Drinking Water Act).

D

MF ist eine Steckverschraubung spezifisch entwickelt für Anwendungen im Bereich Nahrungsmittel und Getränke.
Die Verschraubung besteht aus Messing mit geringem Bleigehalt und ist nach NSF 169 Richtlinie für den Kontakt mit Wasser, Tee und Kaffee zertifiziert. Diese Baureihe ist daher die perfekte Lösung für Kaffeemaschinenhersteller oder Getränkeautomaten.
Die NSF Zertifizierung wird auch mit der Konformität gemäß NSF/ANSI 372 Richtlinie ergänzt, die die Tauglichkeit von Messing und den maximal erlaubten Bleianteil für Trinkwasserkontakt garantiert (U.S Safe Drinking Water Act)

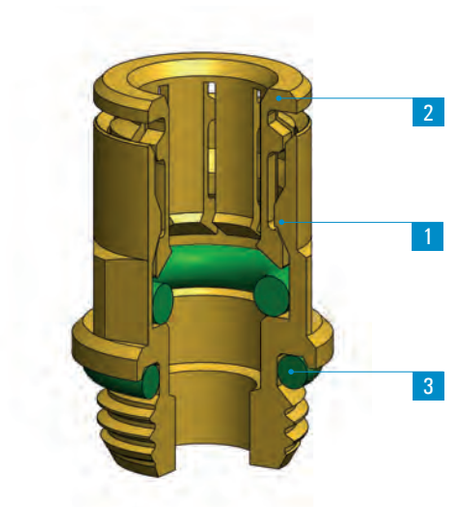
MF

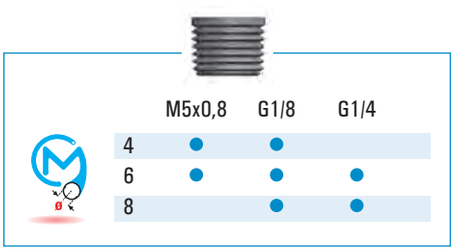
1	2	3
Corpo Body Corps Körper	Pinza aggraffaggio Gripping collet Pince Spannzange	Guarnizioni Seals Joint d'étancheité Dichtung
Ottone EN 12164 CW510L Conforme NSF/ANSI 372 Brass EN12164 CW510L Compliant NSF/ANSI 372 Laiton EN12164 CW510L, Conforme NSF/ANSI 372 Messing EN12164 CW510L, NSF/ANSI 372 konform	Ottone EN 12164 CW510L Conforme NSF/ANSI 372 Brass EN12164 CW510L Compliant NSF/ANSI 372 Laiton EN12164 CW510L, Conforme NSF/ANSI 372 Messing EN12164 CW510L, NSF/ANSI 372 konform	FPM Conforme FDA FDA Compliant FPM Conforme FDA, FPM FDA konform, FPM

-20°C ÷ 150°C

Max 20 bar

-99 KPa





SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
Tubi termoplastici per applicazioni Food.
Tolleranze accettabili sui tubi:
+/– 0,07 mm fino a Ø 8 mm.

Campi di applicazione:
Applicazioni nel settore Food and Beverage.

DATA SHEET

Recommended tubings:
Any tubing recommended for Food and Beverage
Acceptable Tolerances on the tubings:
+/– 0,07 mm up to Ø 8 mm.

Application fields:
Food and Beverage Applications.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
Tous tubes thérmoplastiques conseillés pour les domaines alimentaires.
Tolerances sur les tubes:
+/– 0,07 mm jusqu'au Ø 8 mm.

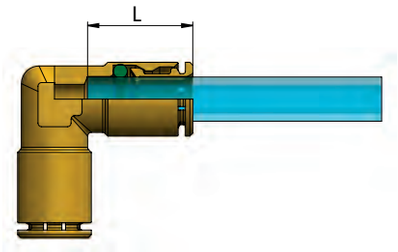
Domaines d'application:
Applications alimentaires et de boissons.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Schläuche tauglich im Nahrungsmittel und Getränkebereich
Schlauchtoleranzen:
+/– 0,07 mm bis Ø 8 mm.

Anwendungsbereiche:
Anwendungen im Bereich Nahrungsmittel und Getränke.

Profondità di inserimento del tubo | Tubing insertion depth | Profondeur d'insertion du tube | Schlaucheinstecktiefe



Øe Tube	L
4	12,8
6	14,3
8	14,3

ISTRUZIONI DI MONTAGGIO

1. Tagliare il tubo a 90° (servendosi della pinza tagliatubo TCUT) verificando l'assenza di bave interne ed esterne e facendo attenzione che il tubo non si presenti ovalizzato dopo il taglio.
2. Inserire il tubo nel raccordo spingendolo fino in battuta.

Estrazione del tubo
Esercitare una leggera pressione sull'anello estrattore, estraendo contemporaneamente il tubo dal corpo del raccordo.

ASSEMBLY INSTRUCTIONS

1. Cut the tube square (by means of a hose cutter i.e. our TCUT) making sure that no burrs are left and that the tube is not oval.
2. Insert the tube into the fitting until it bottoms.

Tube release
While pressing on the release ring, pull out the tube from the fitting.

INSTRUCTIONS DE MONTAGE

1. Sectionner le tube à 90° par notre coupe tube TCUT en prenant soin de ne par créer des bavures et de ne pas ovaliser le tube.
2. Pousser le tube jusqu' au fond du raccord.

Débranchement du tube
Appuyer sur le poussoir en métal et tirer simultanément sur le tube.

MONTAGEANWEISUNGEN

1. Schlauch mittels unserer Schlauchschere (TCUT) 90° abschneiden und entgraten.
2. Darauf achten, daß der Schlauch danach nicht oval gequetscht ist und dann ihn is zum Verschraubungsanschlag einstecken.

Schlauchlösen
Auf den Druckring drücken und gleichzeitig den Schlauch rausziehen.

Effettuato il collegamento, assicurarsi che il tubo inserito nel raccordo non sia sottoposto ad alcuna forza di trazione; è necessario inoltre rispettare durante il collegamento del tubo il raggio minimo di curvatura consigliato così come riportato nella sezione tubi di questo catalogo tecnico (vedi pag. 363)
Al fine di evitare lo sgancio involontario del tubo nessun oggetto deve venire a contatto con l'anello estrattore del raccordo evitando così l'esercizio di qualsiasi forza indesiderata, anche solo laterale, che potrebbe causare la pressione dell'anello estrattore e conseguente rilascio del tubo.
Per il serraggio delle parti filettate del raccordo si raccomanda di attenersi alle coppie consigliate riportate a pag.6

Once the tubing is connected to the fitting, make sure that the tubing is not subject to any tensile strength and that the min. recommended bending radius stated in the tubing section of this catalogue is complied with (see page 363).
To prevent any accidental tube release, no components have to come in touch with the release ring and exercise any unwanted pressure on the same. Indeed however lateral, any load on the release ring may cause the tube disconnection.
To tighten threads, please check out our tightening torque chart illustrated at page 6.

Une fois effectué le branchement, s'assurer que le tube inséré dans le raccord n'est soumis à aucune force de traction. Egalement, il est nécessaire de respecter, lors du branchement du tube, le rayon minimum de courbure conseillé dans la section tubes de ce catalogue technique (voir la page 363). Afin d'éviter le décrochage involontaire du tube, aucun objet ne doit entrer en contact avec la bague d'extraction du raccord, empêchant ainsi l'exercice de toute force indésirable, ne serait-ce que latérale, qui pourrait provoquer la pression de la bague d'extraction et donc le relâchement du tube.
Pour le serrage des parties filetées du raccord, il est recommandé de s'en tenir aux couples de serrage conseillés et reportés à la page 6.

Nach der Schlauchverbindung, sicherstellen, dass der in die Verschraubung eingeführte Schlauch keinen Zugbelastungen ausgesetzt ist; beim Anschluss des Schlauchs muss der empfohlene Mindestbiegeradius eingehalten werden, gemäß den in diesem technischen Katalog im Schlauchabschnitt, angegebenen Hinweisen (siehe Seite 363).
Um das versehentliche Lösen des Schlauchs zu verhindern, darf kein Gegenstand den Lösering der Verschraubung berühren. Keine unerwünschte Kraft darf auch nicht seitlich einwirken und kein Druck soll auf den Lösering ausgeübt werden, denn dies das Schlauchlösen verursachen könnte.
Zum Festziehen der Gewinde sich an den, auf Seite 6, empfohlenen Drehmomente einhalten.

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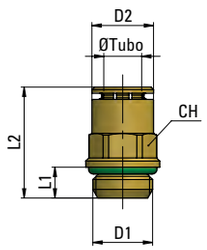
MF 12

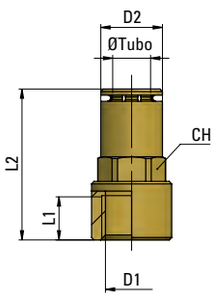
Diritto maschio cilindrico | Parallel straight, male | Union simple mâle cylindrique | Gerade Einschraubverschraubung, zylindrisch



Type	Ø Tubo	D1	D2	L1	L2	CH	g
12 04 M5	**4**	**M5x0,8**	8	4	18,7	8	-
12 04 18	**4**	**G1/8**	8	5	17	8	5,3
12 06 M5	**6**	**M5x0,8**	10	4	20,5	10	-
12 06 18	**6**	**G1/8**	10	5	18	10	5,8
12 06 14	**6**	**G1/4**	10	6,5	18,5	10	9,1
12 08 18	**8**	**G1/8**	12	5	21,5	12	-
12 08 14	**8**	**G1/4**	12	6,5	19	12	9,1

MF 13

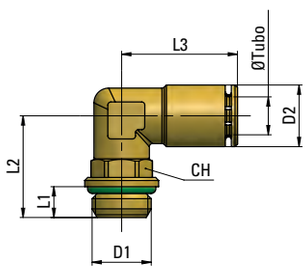
Diritto femmina | Female straight | Union simple femelle | Gerade Aufschraubverschraubung



Type	Ø Tubo	D1	D2	L1	L2	CH	g
13 04 18	**4**	**G1/8**	8	7	23,5	8	-
13 06 18	**6**	**G1/8**	10	7	24,5	10	10,5
13 06 14	**6**	**G1/4**	10	9	27,5	10	14
13 08 14	**8**	**G1/4**	12	9	28	12	15,5

MF 16

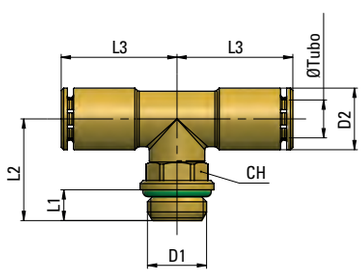
Gomito maschio cilindrico girevole | Parallel swivelling elbow fitting, male | Raccord à coude tournant, mâle cylindrique | Schwenkbare Winkelverschraubung, zylindrisch



Type	Ø Tubo	D1	D2	L1	L2	L3	CH	g
16 04 M5	**4**	**M5x0,8**	8	4	14,5	18	9	10,2
16 04 18	**4**	**G1/8**	8	5	16,5	18	9	11,2
16 06 M5	**6**	**M5x0,8**	10	4	14,5	18,8	9	-
16 06 18	**6**	**G1/8**	10	5	16,5	18,8	9	11,9
16 06 14	**6**	**G1/4**	10	6,5	18	18,8	9	14,5
16 08 18	**8**	**G1/8**	12	5	18,2	20,5	12	-
16 08 14	**8**	**G1/4**	12	6,5	20,7	20,5	12	-

MF 21

T centrale maschio cilindrico girevole | Swivelling tee fitting, parallel | Raccord à té tournant, mâle cylindrique | T-Verschraubung, schwenkbar und zylindrisch



Type	Ø Tubo	D1	D2	L1	L2	L3	CH	g
21 04 18	**4**	**G1/8**	8	5	16,5	18	9	14,5
21 06 18	**6**	**G1/8**	10	5	16,5	18,8	9	-
21 06 14	**6**	**G1/4**	10	6,5	18	18,8	9	-
21 08 18	**8**	**G1/8**	12	5	18,2	20,5	12	-
21 08 14	**8**	**G1/4**	12	6,5	20,7	20,5	12	-

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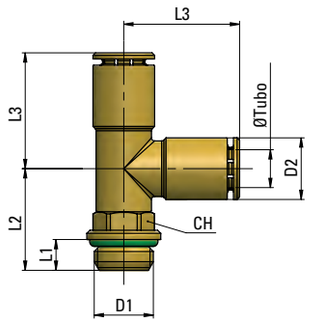
MF 24

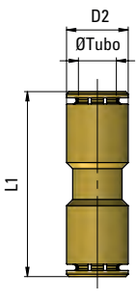
T laterale maschio cilindrico girevole | Lateral run tee fitting, parallel | Raccord à té latéral cylindrique, tournant | T-Schwenkverschraubung, zylindrisch



Type	Ø Tubo	D1	D2	L1	L2	L3	CH	g
24 04 18	4	G1/8	8	5	16,5	18	9	-
24 06 18	6	G1/8	10	5	16,5	18,8	9	15,1
24 06 14	6	G1/4	10	6,5	18	18,8	9	-
24 08 18	8	G1/8	12	5	18,2	20,5	12	-
24 08 14	8	G1/4	12	6,5	20,5	20,7	12	-

MF 26

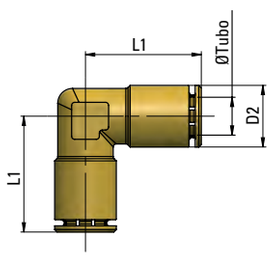
Giunzione intermedia | Union | Union simple égale | Gerade Verbindung



Type	Ø Tubo	D2	L1	g
26 04 04	4	8	27	5,2
26 06 06	6	10	30	7,5
26 08 08	8	12	30	-

MF 28

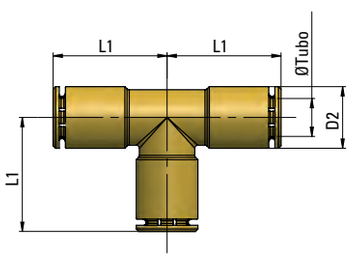
Gomito intermedio | Union elbow | Raccord à coude | Winkelverschraubung



Type	Ø Tubo	D2	L1	g
28 04 04	4	8	18	11,2
28 06 06	6	10	18,8	-
28 08 08	8	12	20,5	-

MF 29

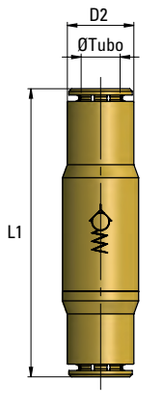
T intermedio | Union tee | T égal | T-Verschraubung



Type	Ø Tubo	D2	L1	g
29 04 04	4	8	18	14,2
29 06 06	6	10	18,8	15,1
29 08 08	8	12	19	-

MF 93

Valvola non ritorno | Chek valve | Clapet anti-retour | Rückschlagventil

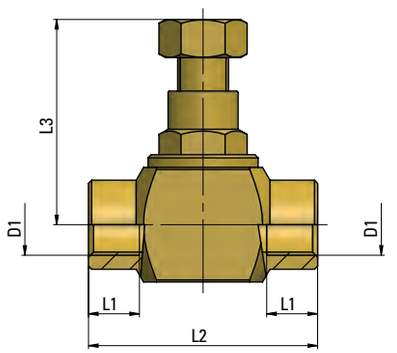


Type	Ø Tubo	D2	L1	g
93 04 04	**4**	8	39,9	10,6
93 06 06	**6**	10,5	45,5	21,1
93 08 08	**8**	12	45,4	20,8

MF 94

Regolatore di flusso in linea | Réducteur de débit en ligne | Drosselrückschlagventil

In-line flfow control



Type	D1	L1	L2	L3 max	g
94 18 18	**G1/8**	8	36	34	83,4
94 14 14	**G1/4**	9	41	34	86,5

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MX LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi Automatici in Acciaio Inox 316L
316L Stainless Steel Push-in Fittings
Raccords Instantanés en Acier Inox 316L
Steckverschraubungen aus Edelstahl 1.4404

NSF COMPONENT

I

I Raccordi Automatici della serie MX, realizzati completamente in Acciaio Inox 316L (1.4404), permettono di realizzare connessioni in ambienti e condizioni di impiego dove l'usuale raccorderia in ottone risulterebbe incompatibile all'uso.

GB

The push-in fittings of the MX line are entirely made of AISI 316L (1.4404) and allow for connections in environments and applications, where any standard fitting would be incompatible for use.

F

Les raccords de la série MX sont entièrement en AISI 316L (1.4404) et ils permettent la connexion dans des endroits et des conditions, où les raccords habituels seraient incompatibles à l'emploi.

D

Die Steckverschraubungen der MX Baureihe sind aus Edelstahl 316L (1.4404) und ermöglichen die Verbindungen in Umgebungen und unter Zuständen, bei denen die üblichen Messingverschraubungen nicht geeignet sind.

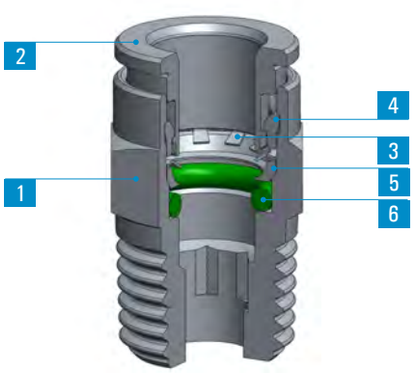
MX

1 - 2	3	4	5	6
Corpo ed anello estrattore Body and Release Ring Corps et poussoir Körper und Lösering	Pinza aggraffaggio Gripping ring Pince Spannzang	Anello di Ritegno Holding Ring Bague de retenue Haltering	Anello porta pinza Protection Ring Bague protection Schutzring	Guarnizioni Seals Joint d'étancheité Dichtung
Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404	Acciaio INOX AISI 301 Stainless steel AISI 301 Acier Inox AISI 301 Edelstahl AISI 301	Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404	Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404	FPM conforme FDA FPM Compliant With FPM comforme à FDA FPM, FDA Konform

-20°C ÷ 180°C

Max 20 bar

-99 KPa



	M5x0,8	G1/8	G1/4	G3/8	G1/2	R1/8	R1/4	R3/8	R1/2
4	●	●	●			●	●		
6	●	●	●			●	●		
8		●	●	●		●	●	●	
10			●	●	●		●	●	●
12			●	●	●		●	●	●

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
Tubo in PVDF, Tubo in PTFE, Tubo in Acciaio Inox (per l'impiego di tubo in metallo si rimanda alle Istruzioni di Montaggio)
Tolleranze accettabili sui tubi:
+/– 0.07 mm fino a Ø 10 mm
+/– 0.1 mm da Ø 10 a Ø 12 mm.

Campi di applicazione:
Pneumatica, Industria Alimentare, Chimica e Medicale-Farmaceutica.

DATA SHEET

Recommended tubings:
PVDF, PTFE and Stainless steel tubes (for metal hose assembly see the instructions above).
Acceptable Tolerances on the tubings:
+/– 0.07 mm up to 10 mm.
+/– 0.1 mm from diam 10 up to 12 mm.

Application fields:
Pneumatics, Food Industry, Chemical, Medical and Pharmaceutical Industry.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
PVDF, Tube PTFE et Tube en acier.
(Pour l'emploi avec tubes en métal, voir les instructions d'émploi).
Tolerances sur les tubes:
+/– 0.07 mm jusqu'au diamètre 10 mm.
+/– 0.1 mm de 10 mm jusqu'à 12 mm.

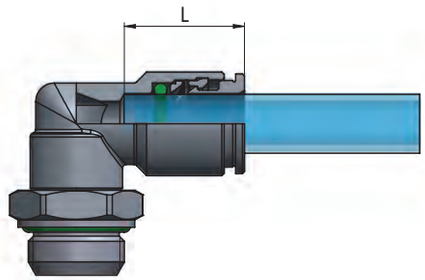
Domaines d'application:
Pneumatique, Industrie alimentaire, Chimique, Médicale et Pharmaceutique.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PVDF, PTFEschlauch und Edelstahlrohr (Bei Montage mit Metallrohren siehe die entsprechenden Montageanweisungen).
Schlauchtoleranzen:
+/– 0.07 mm bis Durchmesser 10 mm.
+/– 0.1 mm von 10 mm bis 12 mm.

Anwendungsbereiche:
Pneumatik, Nahrungsindustrie, chemische, medikale und pharmazeutische Industrie.

Profondità di inserimento del tubo | Tubing insertion depth | Profondeur d'insertion du tube | Schlaucheinstecktiefe



Øe Tube	L
4	13,2
6	16,1
8	16,2
10	18,3
12	19,5

ISTRUZIONI DI MONTAGGIO

1. Tagliare il tubo a 90° (servendosi della pinza tagliatubo TCUT) verificando l'assenza di bave interne ed esterne e facendo attenzione che il tubo non si presenti ovalizzato dopo il taglio.
   In caso di utilizzo di tubo metallico praticare una scanalatura sul tubo mediante apposito apparecchio (TINC). L'esecuzione della scanalatura sul tubo deve essere in funzione del diametro del tubo in modo da permettere il corretto aggraffaggio della pinza di tenuta del raccordo.
2. Inserire il tubo nel raccordo spingendolo fino in battuta.

Estrazione del tubo
Esercitare una leggera pressione sull'anello estrattore, estraendo contemporaneamente il tubo dal corpo del raccordo.

ASSEMBLY INSTRUCTIONS

1. Cut the tube square (by means of a hose cutter i.e. our TCUT) making sure that no burrs are left and that the tube is not oval.
   In case of use with metal hoses, make a groove all around the tube diameter with a suitable tool (TINC).The groove must be made according to the tube diameter so that the fitting collect can better grip onto it.
2. Insert the tube into the fitting until it bottoms.

Tube release
While pressing on the release ring, pull out the tube from the fitting.

INSTRUCTIONS DE MONTAGE

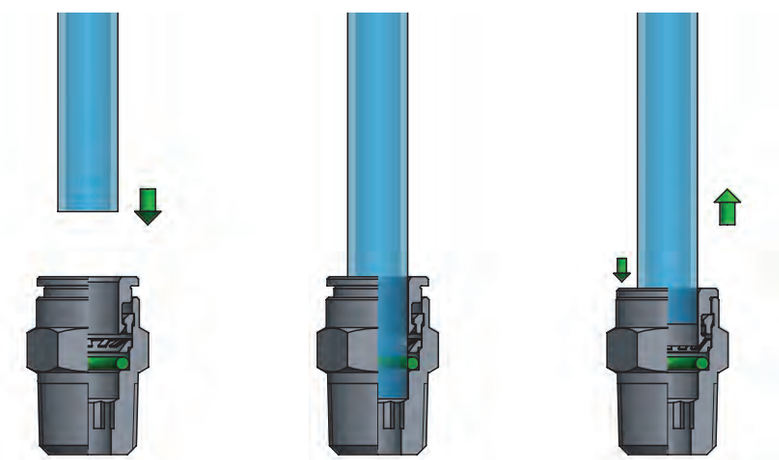
1. Sectionner le tube à 90° par notre coupe tube TCUT en prenant soin de ne par créer des bavures et de ne pas ovaliser le tube.
   Pour l'emploi avec des tubes en métal, pratiquer une rainure le long du diamètre du tube par un outil adéquat pour l'usage (TINC). La rainure devra toujours être en fonction du diamètre du tube, pour que la pince puisse bien l'agrafer.
2. Pousser le tube jusqu' au fond du raccord.

Débranchement du tube
Appuyer sur le poussoir en métal et tirer simultanément sur le tube.

MONTAGEANWEISUNGEN

1. Schlauch mittels unserer Schlauchschere (TCUT) 90° abschneiden und entgraten. Bei Montage mit Metallrohren, eine Nut um den Rohrdurchmesser herum mit dem dazu geeigneten Werkzeug machen (TINC). Die Nut muss im Verhältnis zu dem Rohrdurch messer stehen, damit die Spannange gut daran klammern kann.
2. Darauf achten, daß der Schlauch danach nicht oval gequetscht ist und dann ihn is zum Verschraubungsanschlag einstecken.

Schlauchlösen
Auf den Druckring drücken und gleichzeitig den Schlauch rausziehen.



Effettuato il collegamento, assicurarsi che il tubo inserito nel raccordo non sia sottoposto ad alcuna forza di trazione; è necessario inoltre rispettare durante il collegamento del tubo il raggio minimo di curvatura consigliato così come riportato nella sezione tubi di questo catalogo tecnico (vedi pag. 363)
Al fine di evitare lo sgancio involontario del tubo nessun oggetto deve venire a contatto con l'anello estrattore del raccordo evitando così l'esercizio di qualsiasi forza indesiderata, anche solo laterale, che potrebbe causare la pressione dell'anello estrattore e conseguente rilascio del tubo.
Per il serraggio delle parti filettate del raccordo si raccomanda di attenersi alle coppie consigliate riportate a pag.6

Once the tubing is connected to the fitting, make sure that the tubing is not subject to any tensile strength and that the min. recommended bending radius stated in the tubing section of this catalogue is complied with (see page 363).
To prevent any accidental tube release, no components have to come in touch with the release ring and exercise any unwanted pressure on the same. Indeed however lateral, any load on the release ring may cause the tube disconnection.
To tighten threads, please check out our tightening torque chart illustrated at page 6.

Une fois effectué le branchement, s'assurer que le tube inséré dans le raccord n'est soumis à aucune force de traction. Egalement, il est nécessaire de respecter, lors du branchement du tube, le rayon minimum de courbure conseillé dans la section tubes de ce catalogue technique (voir la page 363).
Afin d'éviter le décrochage involontaire du tube, aucun objet ne doit entrer en contact avec la bague d'extraction du raccord, empêchant ainsi l'exercice de toute force indésirable, ne serait-ce que latérale, qui pourrait provoquer la pression de la bague d'extraction et donc le relâchement du tube.
Pour le serrage des parties filetées du raccord, il est recommandé de s'en tenir aux couples de serrage conseillés et reportés à la page 6.

Nach der Schlauchverbindung, sicherstellen, dass der in die Verschraubung eingeführte Schlauch keinen Zugbelastungen ausgesetzt ist; beim Anschluss des Schlauchs muss der empfohlene Mindestbiegeradius eingehalten werden, gemäß den in diesem technischen Katalog im Schlauchabschnitt, angegebenen Hinweisen (siehe Seite 363).
Um das versehentliche Lösen des Schlauchs zu verhindern, darf kein Gegenstand den Lösering der Verschraubung berühren. Keine unerwünschte Kraft darf auch nicht seitlich einwirken und kein Druck soll auf den Lösering ausgeübt werden, denn dies das Schlauchlösen verursachen könnte.
Zum Festziehen der Gewinde sich an den, auf Seite 6, empfohlenen Drehmomente einhalten.

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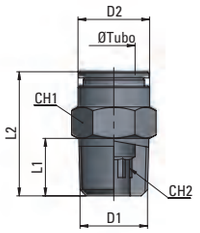
MX 11

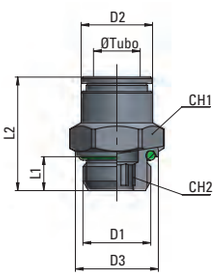
Diritto maschio conico | Taper straight, male | Union simple mâle conique | Gerade Einschraubverschraubung, kegelig



	Type	Ø Tubo	D1	D2	L1	L2	CH1	CH2	g
	11 04 18	4	R1/8	9	7,5	16,5	10	3	6,3
	11 04 14	4	R1/4	9	11	20,5	14	3	16,1
	11 06 18	6	R1/8	11,7	7,5	21	12	4	9,5
	11 06 14	6	R1/4	12	11	20,5	14	4	14,3
	11 08 18	8	R1/8	13,7	7,5	25	14	6	13,5
	11 08 14	8	R1/4	13,7	11	23,5	14	6	14,4
new	11 08 38	8	R3/8	13,9	11,5	22,5	17	6	23,7
	11 10 14	10	R1/4	15,7	11	30,5	16	8	20,3
	11 10 38	10	R3/8	16	11,5	24	17	8	21,5
new	11 10 12	10	R1/2	15,7	14	27	22	8	-
	11 12 38	12	R3/8	18,7	11,5	27,5	19	10	25,7
	11 12 12	12	R1/2	19	14	27,5	22	10	42,1
new	11 12 14	12	R1/4	18,7	11	32	19	8	-

MX 12

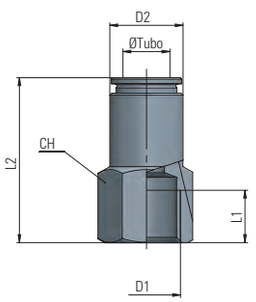
Diritto maschio cilindrico | Parallel straight, male | Union simple mâle cylindrique | Gerade Einschraubverschraubung, zylindrisch



	Type	Ø Tubo	D1	D2	D3	L1	L2	CH1	CH2	g
new	12 03 M5	3	M5x0,8	6,5	9	4	16	8	-	–
	12 04 M5	4	M5x0,8	9	8	4	19	9	-	4,9
	12 04 18	4	G1/8	9	12,9	5	16,5	13	3	8,1
	12 06 M5	6	M5x0,8	11,8	8	4	22,5	12	-	10,3
	12 06 18	6	G1/8	11,7	12,9	5	19,5	13	4	9,5
	12 06 14	6	G1/4	11,7	15,8	6,5	19,5	16	4	15,8
	12 08 18	8	G1/8	13,7	12,9	5	23	14	6	12,8
new	12 08 14	8	G1/4	13,7	15,9	6,5	21,5	16	6	15,5
	12 08 38	8	G3/8	13,7	20	7	21,5	17	6	-
	12 10 14	10	G1/4	15,7	15,8	6,5	27,5	16	8	19,2
new	12 10 38	10	G3/8	16	20	7	25	17	8	24,4
new	12 10 12	10	G1/2	15,8	25	8,5	25,5	22	8	-
	12 12 14	12	G1/4	18,8	16	6,5	28,5	19	8	-
	12 12 38	12	G3/8	18,8	20	7	28	21	10	31,8
	12 12 12	12	G1/2	18,8	25	8,5	26,5	22	10	41,8

MX 13

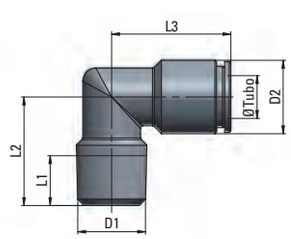
Diritto femmina | Female straight | Union simple femelle | Gerade Aufschraubverschraubung



Type	Ø Tubo	D1	D2	L1	L2	CH	g
13 04 18	4	G1/8	9	7	24,5	13	-
13 06 18	6	G1/8	12	7	26,5	13	-
13 06 14	6	G1/4	12	10	31	16	-
13 08 18	8	G1/8	13,8	7	26,5	14	18,2
13 08 14	8	G1/4	14	10	31	16	-
13 08 38	8	G3/8	14	11	32,5	21	-
13 10 14	10	G1/4	15,7	10	33	16	24
13 10 38	10	G3/8	16	11	34,5	21	-
13 10 12	10	G1/2	16	11	36	24	-
13 12 38	12	G3/8	19	11	35,5	21	77,5
13 12 12	12	G1/2	19	11	37	24	-

MX 14

Gomito maschio conico | Taper elbow fitting, male | Raccord à coude mâle conique | Winkelverschraubung, kegelig



Type	Ø Tubo	D1	D2	L1	L2	L3	g
14 04 18	4	R1/8	9	9,8	17	17,5	10,2
14 06 18	6	R1/8	12	9,8	17	20,5	14
14 06 14	6	R1/4	12	11,3	20,7	20,5	20,8
14 08 18	8	R1/8	14	9,5	18	22,5	19,6
14 08 14	8	R1/4	14	11,3	20,7	22,5	22,3
14 10 14	10	R1/4	16	12,1	21,5	24,5	39,5

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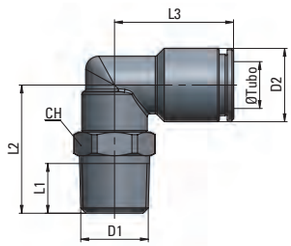
MX 15

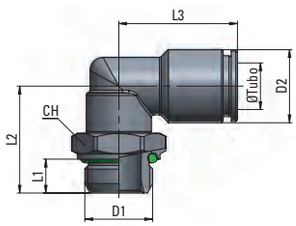
Gomito maschio conico girevole | Taper swivelling elbow fitting, male | Raccord à coude tournant, mâle conique | Schwenkbare Winkelverschraubung, kegelig



	Type	Ø Tubo	D1	D2	L1	L2	L3	CH	g
	15 04 18	4	R1/8	9	7,5	18	17,5	10	10,8
	15 06 18	6	R1/8	12	7,5	20,5	21,5	13	21,2
	15 06 14	6	R1/4	12	11	24,5	21,5	14	25,2
	15 08 18	8	R1/8	14	7,5	20,5	22,5	13	22,2
	15 08 14	8	R1/4	14	11	24,5	22,5	14	26,3
new	15 08 38	8	R3/8	14	11,5	25	22,5	17	-
	15 10 14	10	R1/4	16	11	27	26	16	37,5
	15 10 38	10	R3/8	16	11,5	27,5	26	17	41,1
new	15 10 12	10	R1/2	16	14	32	26	22	-
new	15 12 14	12	R1/4	19	11	30,5	28,5	21	-
	15 12 38	12	R3/8	19	11,5	31	28,5	21	65,1
	15 12 12	12	R1/2	19	14	34	28,5	22	71,5

MX 16

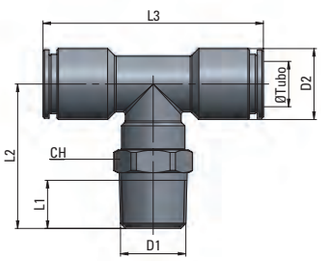
Gomito maschio cilindrico girevole | Parallel swivelling elbow fitting, male | Raccord à coude tournant, mâle cylindrique | Schwenkbare Winkelverschraubung, zylindrisch



	Type	Ø Tubo	D1	D2	L1	L2	L3	CH	g
	16 04 M5	4	M5x0,8	9	4	14,5	17,5	9	8,7
	16 04 18	4	G1/8	9	5	16,5	17,5	13	12,2
	16 06 M5	6	M5x0,8	12	4	15,5	20,5	9	13,2
	16 06 18	6	G1/8	12	5	18,5	21,5	13	20,3
	16 06 14	6	G1/4	12	6,5	20,5	21,5	16	24,3
	16 08 18	8	G1/8	14	5	18,5	22,5	13	21,6
	16 08 14	8	G1/4	14	6,5	20,5	22,5	16	25,8
new	16 08 38	8	G3/8	14	7	22,5	22,5	21	-
	16 10 14	10	G1/4	16	6,5	22,5	26	16	34,6
	16 10 38	10	G3/8	16	7	24	26	21	41
new	16 10 12	10	G1/2	16	8,5	29	26	22	-
new	16 12 14	12	G1/4	19	6,5	26	28,5	21	-
	16 12 38	12	G3/8	19	7	26,5	28,5	21	59,5
	16 12 12	12	G1/2	19	8,5	31	28,5	22	69,2

MX 20

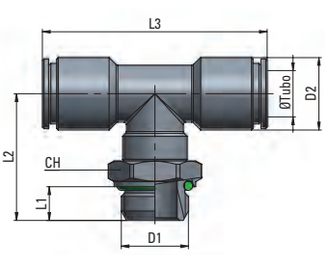
T centrale maschio conico girevole | Swivelling tee fitting, taper | Raccord à té tournant, mâle conique | T-Verschraubung, schwenkbar und kegelig



	Type	Ø Tubo	D1	D2	L1	L2	L3	CH	g
	20 04 18	4	R1/8	9	7,5	21,5	35	10	16,1
	20 06 18	6	R1/8	12	7,5	20,5	43	13	30,3
	20 06 14	6	R1/4	12	11	24,5	43	14	33,9
	20 08 18	8	R1/8	14	7,5	20,5	43	13	32,2
	20 08 14	8	R1/4	14	11	24,5	43	14	35,4
	20 10 14	10	R1/4	16	11	27,5	51	16	61
	20 10 38	10	R3/8	16	11,5	28	51	17	64,1
new	20 12 38	12	R3/8	19	11,5	31	57	21	-
new	20 12 12	12	R1/2	19	14	34	57	22	-

MX 21

T centrale maschio cilindrico girevole | Swivelling tee fitting, parallel | Raccord à té tournant, mâle cylindrique | T-Verschraubung, schwenkbar und zylindrisch



	Type	Ø Tubo	D1	D2	L1	L2	L3	CH	g
	21 04 M5	4	M5x0,8	9	4	18	35	9	14
	21 04 18	4	G1/8	9	5	20	35	13	17,6
	21 06 18	6	G1/8	12	5	18,5	43	13	29,2
	21 06 14	6	G1/4	12	6,5	20,5	43	16	33,3
	21 08 18	8	G1/8	14	5	18,5	43	13	30,7
	21 08 14	8	G1/4	14	6,5	20,5	43	16	34,8
	21 10 14	10	G1/4	16	6,5	22,5	51	16	57,1
	21 10 38	10	G3/8	16	7	24,5	51	21	63,9
new	21 12 38	12	G3/8	19	7	26,5	57	21	-
new	21 12 12	12	G1/2	19	8,5	31	57	22	-

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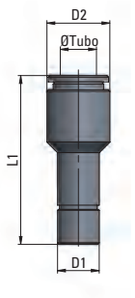
MX 25

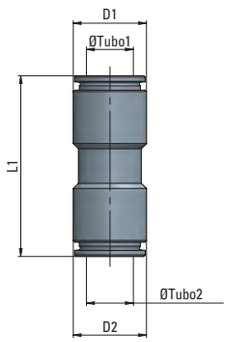
Riduzione | Reducer | Réduction | Reduzierstück



Type	Ø Tubo	D1	D2	L1	g
25 04 06	4	6	9	30,5	6,5
25 06 08	6	8	12	32	11,9
25 06 10	6	10	12	35	-
25 08 10	8	10	14	35	14,8
25 08 12	8	12	14	38	-
25 10 12	10	12	16	41	-

MX 26

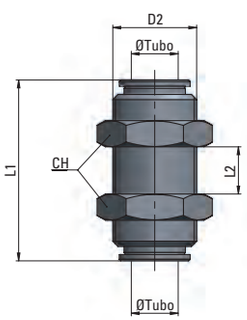
Giunzione intermedia | Union | Union simple égale | Gerade Verbindung



Type	Ø Tubo1	Ø Tubo2	D1	D2	L1	g
26 04 04	4	4	9	9	28	7,8
26 06 06	6	6	12	12	33,6	15,7
26 06 04	6	4	12	12	31	15,5
26 08 08	8	8	14	14	34	19,5
26 08 06	8	6	14	14	34	23,8
26 10 10	10	10	16	16	38,6	24,9
new 26 10 08	10	8	16	14	37,1	-
26 12 12	12	12	19	19	41	40
new 26 12 10	12	10	19	16	40,3	-

MX 27

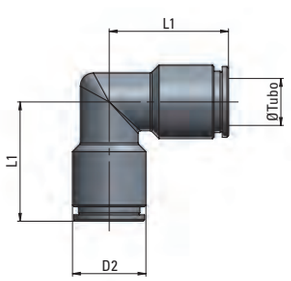
Giunzione intermedia passaparete | Bulkhead union | Union traversée de cloison | Gerade Schottverschraubung



Type	Ø Tubo	D2	L1	L2	CH	g
27 04 04	4	M12x1	28	11,5	16	19,9
27 06 06	6	M14x1	34	15,5	17	31,4
27 08 08	8	M16x1	34	15,5	19	36,8
27 10 10	10	M18x1	39	18,5	21	48,4
27 12 12	12	M20x1	41	20,5	24	61,8

MX 28

Gomito intermedio | Union elbow | Raccord à coude | Winkelverschraubung



Type	Ø Tubo	D2	L1	g
28 04 04	4	9	17,5	11,7
28 06 06	6	12	21	18
28 08 08	8	14	22,5	24,1
28 10 10	10	16	24,5	43
28 12 12	12	18	27	49,3

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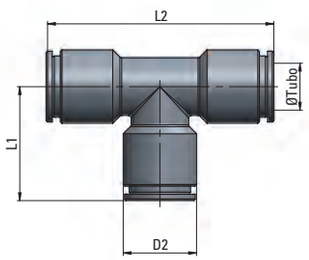
MX 29

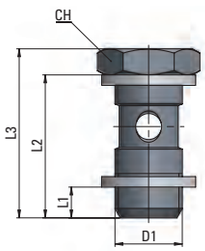
T intermedio | Union tee | T égal | T-Verschraubung



Type	Ø Tubo	D2	L1	L2	g
29 04 04	4	9	17,5	35	14,6
29 06 06	6	12	21	42	29,9
29 08 08	8	14	21,5	43	32,4
29 10 10	10	16	24,5	49	56,1
29 12 12	12	18	27	54	65,9

MX 31

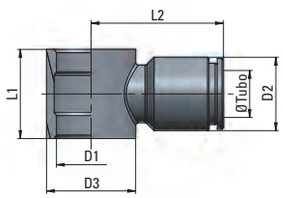
Asta singola | Simple screw | Vis simple | Hohlschraube



Type	D1	L1	L2	L3	CH	g
31 00 18	G1/8	5,4	24,9	28,9	14	15,1
31 00 14	G1/4	6,4	27,4	32,4	17	26,1
31 00 38	G3/8	6,4	30	36	21	43,6
31 00 12	G1/2	7,5	35,5	41,5	26	76,5

MX 35

Anello singolo | Single banjo ring | Banjo simple | Ringstück



Type	Ø Tubo	D1	D2	D3	L1	L2	g
35 04 18	4	1/8	9	14	15	20,5	13,1
35 06 18	6	1/8	12	14	15	22,5	16,1
35 06 14	6	1/4	12	17	17	24	18,7
35 08 18	8	1/8	14	14	15	23	16,6
35 08 14	8	1/4	14	17	17	25	20,4
35 10 14	10	1/4	16	17	17	27	23,1
35 10 38	10	3/8	16	22	20	29	35,5
35 12 38	12	3/8	16	22	20	31	40,8
35 12 12	12	1/2	19	26	24	33	52,2

PX LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi Automatici in Acciaio Inox 316L Pollici/NPT
316L Stainless Steel Push-in Fittings, Inch/NPT
Raccords Instantanés en Acier Inox 316L, Pouce/NPT
Steckverschraubungen aus Edelstahl 1.4404, Zoll/NPT

NSF COMPONENT

I

I Raccordi Automatici della serie PX, conformi allo Standard Americano (tubi in Pollici e filettatura NPT), sono realizzati completamente in Acciaio Inox 316L (1.4404) e permettono di realizzare connessioni in ambienti e condizioni di impiego dove l'usuale raccorderia in ottone risulterebbe incompatibile all'uso.

GB

The push-in fittings of the PX line are manufactured according to the American Standards (Inch tubings and NPT threads) and are made of AISI 316L (1.4404). They allow for connections in environments and applications, where any standard fitting would be incompatible for use.

F

Les raccords de la série PX sont produits selon les standards américains (tuyaux en pouce et filetage en NTP); ils sont entièrement en AISI 316L (1.4404) et ils permettent la connexion dans des endroits et des conditions, où les raccords habituels seraient incompatibles à l'emploi.

D

Die Steckverschraubungen der PX Baureihe, gemäß der amerikanischen Vorschriften hergestellt (zöllige Schläuche und NPT Gewinde), sind aus Edelstahl 316L (1.4404) und ermöglichen die Verbindungen in Umgebungen und unter Zuständen, bei denen die üblichen Messingverschraubungen nicht geeignet sind.

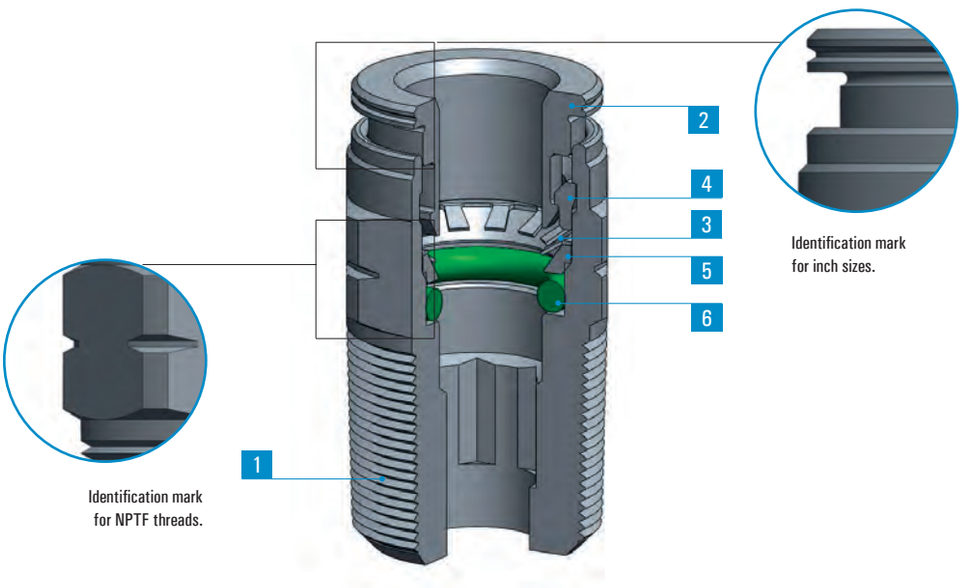
PX

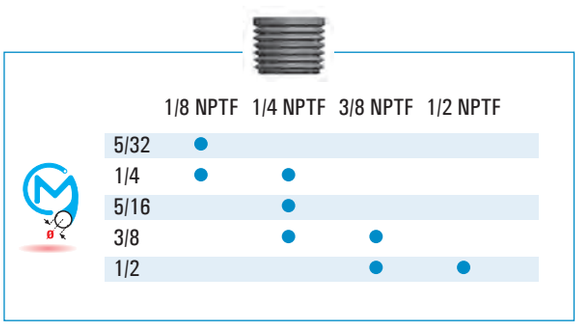
1 - 2	3	4	5	6
Corpo ed anello estrattore Body and Release Ring Corps et poussoir Körper und Lösering	Pinza aggraffaggio Gripping ring Pince Spannzang	Anello di Ritegno Holding Ring Bague de retenue Haltering	Anello porta pinza Protection Ring Bague protection Schutzring	Guarnizioni Seals Joint d'étancheité Dichtung
Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404	Acciaio INOX AISI 301 Stainless steel AISI 301 Acier Inox AISI 301 Edelstahl AISI 301	Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404	Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404	FPM conforme FDA FPM Compliant With FPM comforme à FDA FPM, FDA Konform

-20°C ÷ 180°C

Max 20 bar

-99 KPa





SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
Tubo in PVDF, Tubo in PTFE, Tubo in Acciaio Inox (per l'impiego di tubo rigido si veda la Sez. Istruzioni di montaggio)
Tolleranze accettabili sui tubi:
+/– 0,07 mm fino a Ø 3/8"
+/– 0,1 mm Ø 1/2".

Campi di applicazione:
Pneumatica, Industria Alimentare, Chimica e Medicale-Farmaceutica.

DATA SHEET

Recommended tubings:
PVDF, PTFE and Stainless steel tubes (for rigid hose assembly see the instructions above).
Acceptable Tolerances on the tubings:
+/– 0,07 mm up to Ø 3/8"
+/– 0,1 mm Ø 1/2".

Application fields:
Pneumatics, Food Industry, Chemical, Medical and Pharmaceutical Industry.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
PVDF, Tube PTFE et Tube en acier.
(Pour l'emploi avec tubes rigides, voir les instructions d'émploi).
Tolerances sur les tubes:
+/– 0,07 mm jusqu'au Ø 3/8"
+/– 0,1 mm Ø 1/2".

Domaines d'application:
Pneumatique, Industrie alimentaire, Chimique, Médicale et Pharmaceutique.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PVDF, PTFEschlauch und Edelstahlrohr (Bei Montage mit Edelstahlrohr siehe die entsprechenden Montageanweisungen).
Schlauchtoleranzen:
+/– 0,07 mm bis Ø 3/8"
+/– 0,1 mm Ø 1/2"

Anwendungsbereiche:
Pneumatik, Nahrungsindustrie, chemische, medikale und pharmazeutische Industrie.

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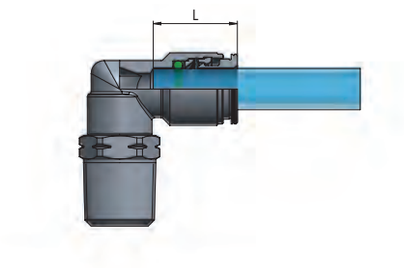
Profondità di inserimento del tubo | Tubing insertion depth | Profondeur d'insertion du tube | Schlaucheinstecktiefe



Øe Tube	L
5/32	13,2
1/4	16,1
5/16	16,2
3/8	18,3
1/2	19,5

ISTRUZIONI DI MONTAGGIO

1. Tagliare il tubo a 90° (servendosi della pinza tagliatubo TCUT) verificando l'assenza di bave interne ed esterne e facendo attenzione che il tubo non si presenti ovalizzato dopo il taglio.
   In caso di utilizzo di tubo metallico praticare una scanalatura sul tubo mediante apposito apparecchio (TINC). L'esecuzione della scanalatura sul tubo deve essere in funzione del diametro del tubo in modo da permettere il corretto aggraffaggio della pinza di tenuta del raccordo.
2. Inserire il tubo nel raccordo spingendolo fino in battuta.

Estrazione del tubo
Esercitare una leggera pressione sull'anello estrattore, estraendo contemporaneamente il tubo dal corpo del raccordo.

ASSEMBLY INSTRUCTIONS

1. Cut the tube square (by means of a hose cutter i.e. our TCUT) making sure that no burrs are left and that the tube is not oval.
   In case of use with metal hoses, make a groove all around the tube diameter with a suitable tool (TINC).The groove must be made according to the tube diameter so that the fitting collect can better grip onto it.
2. Insert the tube into the fitting until it bottoms.

Tube release
While pressing on the release ring, pull out the tube from the fitting.

INSTRUCTIONS DE MONTAGE

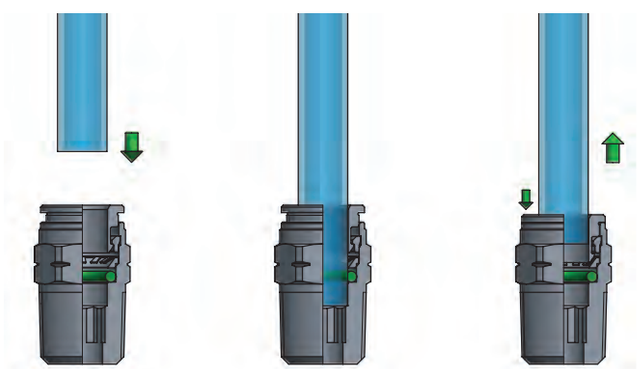
1. Sectionner le tube à 90° par notre coupe tube TCUT en prenant soin de ne par créer des bavures et de ne pas ovaliser le tube.
   Pour l'emploi avec des tubes en métal, pratiquer une rainure le long du diamètre du tube par un outil adéquat pour l'usage (TINC). La rainure devra toujours être en fonction du diamètre du tube, pour que la pince puisse bien l'agrafer.
2. Pousser le tube jusqu' au fond du raccord.

Débranchement du tube
Appuyer sur le poussoir en métal et tirer simultanément sur le tube.

MONTAGEANWEISUNGEN

1. Schlauch mittels unserer Schlauchschere (TCUT) 90° abschneiden und entgraten. Bei Montage mit Metallrohren, eine Nut um den Rohrdurchmesser herum mit dem dazu geeigneten Werkzeug machen (TINC). Die Nut muss im Verhältnis zu dem Rohrdurch messer stehen, damit die Spannange gut daran klammern kann.
2. Darauf achten, daß der Schlauch danach nicht oval gequetscht ist und dann ihn is zum Verschraubungsanschlag einstecken.

Schlauchlösen
Auf den Druckring drücken und gleichzeitig den Schlauch rausziehen.



Effettuato il collegamento, assicurarsi che il tubo inserito nel raccordo non sia sottoposto ad alcuna forza di trazione; è necessario inoltre rispettare durante il collegamento del tubo il raggio minimo di curvatura consigliato così come riportato nella sezione tubi di questo catalogo tecnico (vedi pag. 363)
Al fine di evitare lo sgancio involontario del tubo nessun oggetto deve venire a contatto con l'anello estrattore del raccordo evitando così l'esercizio di qualsiasi forza indesiderata, anche solo laterale, che potrebbe causare la pressione dell'anello estrattore e conseguente rilascio del tubo.
Per il serraggio delle parti filettate del raccordo si raccomanda di attenersi alle coppie consigliate riportate a pag.6

Once the tubing is connected to the fitting, make sure that the tubing is not subject to any tensile strength and that the min. recommended bending radius stated in the tubing section of this catalogue is complied with (see page 363).
To prevent any accidental tube release, no components have to come in touch with the release ring and exercise any unwanted pressure on the same. Indeed however lateral, any load on the release ring may cause the tube disconnection.
To tighten threads, please check out our tightening torque chart illustrated at page 6.

Une fois effectué le branchement, s'assurer que le tube inséré dans le raccord n'est soumis à aucune force de traction. Egalement, il est nécessaire de respecter, lors du branchement du tube, le rayon minimum de courbure conseillé dans la section tubes de ce catalogue technique (voir la page 363).
Afin d'éviter le décrochage involontaire du tube, aucun objet ne doit entrer en contact avec la bague d'extraction du raccord, empêchant ainsi l'exercice de toute force indésirable, ne serait-ce que latérale, qui pourrait provoquer la pression de la bague d'extraction et donc le relâchement du tube.
Pour le serrage des parties filetées du raccord, il est recommandé de s'en tenir aux couples de serrage conseillés et reportés à la page 6.

Nach der Schlauchverbindung, sicherstellen, dass der in die Verschraubung eingeführte Schlauch keinen Zugbelastungen ausgesetzt ist; beim Anschluss des Schlauchs muss der empfohlene Mindestbiegeradius eingehalten werden, gemäß den in diesem technischen Katalog im Schlauchabschnitt, angegebenen Hinweisen (siehe Seite 363).
Um das versehentliche Lösen des Schlauchs zu verhindern, darf kein Gegenstand den Lösering der Verschraubung berühren. Keine unerwünschte Kraft darf auch nicht seitlich einwirken und kein Druck soll auf den Lösering ausgeübt werden, denn dies das Schlauchlösen verursachen könnte.
Zum Festziehen der Gewinde sich an den, auf Seite 6, empfohlenen Drehmomente einhalten.

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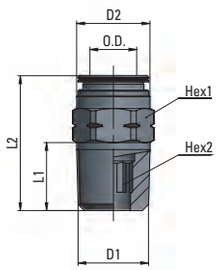
PX 11

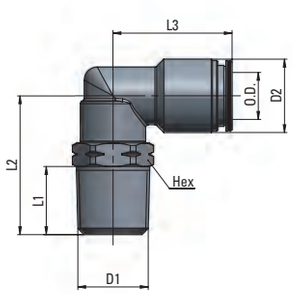
Diritto maschio conico | Taper straight, male | Union simple mâle conique | Gerade Einschraubverschraubung, kegelig



Type	Tube OD	D1 NPTF	D2	L1	L2	HEX1	HEX2	g
11 5/32 1/8	5/32"	1/8	9,5	8,5	19,5	12	1/8	9,8
11 1/4 1/8	1/4"	1/8	12	8,5	22	13	5/32	10,9
11 1/4 1/4	1/4"	1/4	12	13	24,5	14	5/32	18,2
11 5/16 1/4	5/16"	1/4	14	13	25,5	14	1/4	16,2
11 3/8 1/4	3/8"	1/4	16	13	32	17	1/4	26,2
11 3/8 3/8	3/8"	3/8	16	13	25,5	18	5/16	25,9
11 1/2 3/8	1/2"	3/8	20	13	29,5	21	3/8	31,9
11 1/2 1/2	1/2"	1/2	20	17	30,5	22	3/8	46,5

PX 15

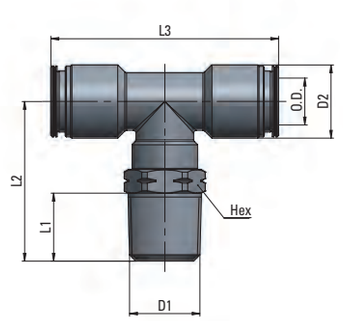
Gomito maschio conico girevole | Taper swivelling elbow fitting, male | Raccord à coude tournant, mâle conique | Schwenkbare Winkelverschraubung, kegelig



Type	Tube OD	D1 NPTF	D2	L1	L2	L3	HEX	g
15 5/32 1/8	5/32"	1/8	9	8,5	19	17,5	12	12,6
15 1/4 1/8	1/4"	1/8	12	8,5	21	21,5	13	21
15 1/4 1/4	1/4"	1/4	12	13	26	21,5	14	25,3
15 5/16 1/4	5/16"	1/4	14	13	26,5	22,5	14	27,3
15 3/8 1/4	3/8"	1/4	16	13	29,4	25,5	17	41,2
15 3/8 3/8	3/8"	3/8	16	13	29,4	25,5	18	43
15 1/2 3/8	1/2"	3/8	20	13	32,5	28	21	67,6
15 1/2 1/2	1/2"	1/2	20	17	37	28	22	77,1

PX 20

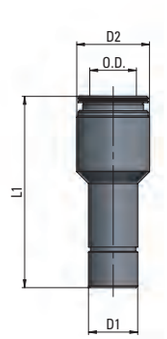
T centrale maschio conico girevole | Swivelling tee fitting, taper | Raccord à té tournant, mâle conique | T-Verschraubung, schwenkbar und kegelig



Type	Tube OD	D1 NPTF	D2	L1	L2	L3	HEX	g
20 5/32 1/8	5/32"	1/8	9,5	8,5	22,5	35	12	18,6
20 1/4 1/8	1/4"	1/8	12	8,5	21,5	43	13	29,3
20 1/4 1/4	1/4"	1/4	12	13	26,5	43	14	33,8
20 5/16 1/4	5/16"	1/4	14	13	30,5	43	14	37,2
20 3/8 1/4	3/8"	1/4	16	13	32	51	17	64,4
20 3/8 3/8	3/8"	3/8	16	13	32	51	18	66,6

PX 25

Riduzione | Reducer | Réduction | Reduzierstück



Type	Tube OD	D1	D2	L1	g
25 5/32 1/4	5/32"	1/4"	9,5	31,5	7,7
25 1/4 5/16	1/4"	5/16"	12	34,5	11,7
25 1/4 3/8	1/4"	3/8"	12	34,5	13,8
25 5/16 3/8	5/16"	3/8"	14	36,5	15,4

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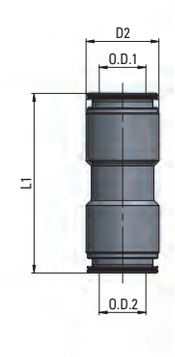
PX 26

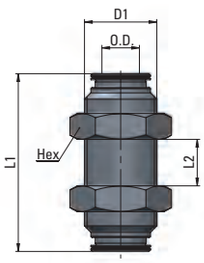
Giunzione intermedia | Union | Union simple égale | Gerade Verbindung



Type	Tube OD1	Tube OD2	D2	L1	g
26 5/32 5/32	**5/32"**	**5/32"**	9,5	28	8,8
26 1/4 1/4	**1/4"**	**1/4"**	12	33,6	14,7
26 5/16 5/16	**5/16"**	**5/16"**	14	34	19,7
26 3/8 3/8	**3/8"**	**3/8"**	16	38,6	26,8
26 1/2 1/2	**1/2"**	**1/2"**	20	41	44

PX 27

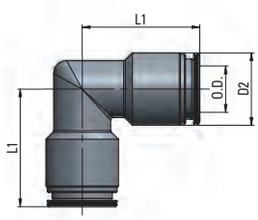
Giunzione intermedia passaparete | Bulkhead union | Union traversée de cloison | Gerade Schottverschraubung



Type	Tube OD	D1	L1	L2	HEX	g
27 5/32 5/32	**5/32"**	M12x1	28	11,5	16	19,8
27 1/4 1/4	**1/4"**	M14x1	34	14,5	17	29,6
27 5/16 5/16	**5/16"**	M16x1	34	15,5	19	36,2
27 3/8 3/8	**3/8"**	M18x1	39	17,5	21	-
27 1/2 1/2	**1/2"**	M22x1,5	41	18,5	26	-

PX 28

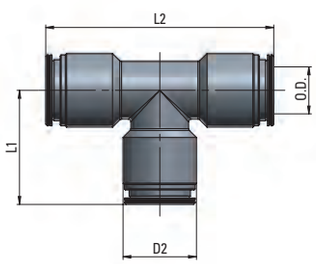
Gomito intermedio | Union elbow | Raccord à coude | Winkelverschraubung



Type	Tube OD	D2	L1	g
28 5/32 5/32	**5/32"**	9,5	17,5	12,7
28 1/4 1/4	**1/4"**	12	21	16,9
28 5/16 5/16	**5/16"**	14	22,5	24,7
28 3/8 3/8	**3/8"**	16	25,5	43,5
28 1/2 1/2	**1/2"**	20	27,5	51

PX 29

T intermedio | Union tee | T égal | T-Verschraubung

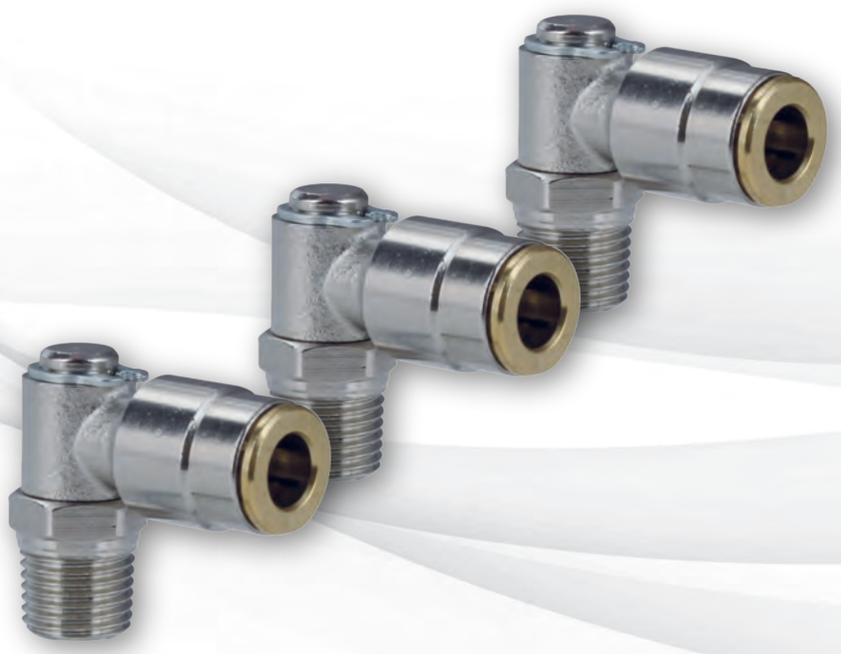


Type	Tube OD	D2	L1	L2	g
29 5/32 5/32	**5/32"**	9,5	17,5	35	16
29 1/4 1/4	**1/4"**	12	21	42	28,1
29 5/16 5/16	**5/16"**	14	21,5	43	33
29 3/8 3/8	**3/8"**	16	25	50	57,8
29 1/2 1/2	**1/2"**	20	27,5	55	70

HP LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi Automatici per Lubrificazione, 250 bar
High Pressure Push-in Fittings, 250 bar
Raccords Instantanés pour le graissage, 250 bar
Hochdrucksteckverschraubungen, 250 bar



I

HP è una nuova generazione di raccordi automatici destinata a garantire la tenuta a pressioni fino ad oggi considerate proibitive per i raccordi tipo push-in.
Il raccordo è stato sviluppato per l'impiego specifico nel campo della lubrificazione e grazie ad un innovativo sistema di aggraffaggio della pinza, il nostro HP può essere impiegato fino ad una pressione massima di 250 bar.

GB

HP is a new generation fitting studied to guarantee tightness with pressure ranges, considered so far "out of reach" with the push-in version.
The fitting has been created and developped to be used in the Lubrication systems. Thanks to the innovative gripping system of the collet, our HP push-in fitting can stand up to a maximum of 250 bar pressure.

F

HP c'est la nouvelle génération de raccords instantanés, qui garantissent la tenue à des pressions considérées jusqu'à aujourd'hui prohibitives pour les raccords push-in. Le raccord a été développé pour l'emploi dans le domaine de la lubrification (graissage) et grâce à un nouveau système d'accrochage de la pince, notre raccord HP peut être utilisé jusqu'à 250 bar maximum.

D

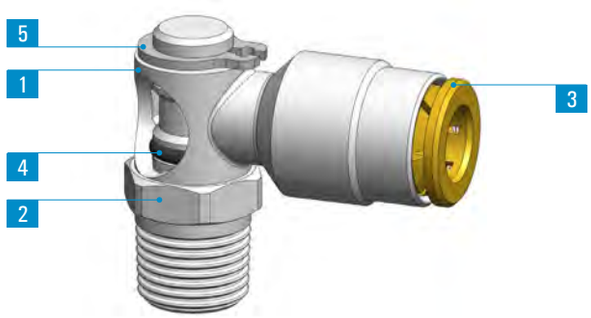
HP ist die Verschraubung der neuesten Generation, die die Verbindung bei höheren Druckbereichen, welche bis vor kurzem mit einer Steckverschraubung als unerreichbar galten, heute ermöglicht.
Diese Verschraubung findet bei Schmieranlagen Anwendung und dank einem erneuerten Spannzangesystem kann unsere HP Verschraubung bis 250 bar eingesetzt werden.

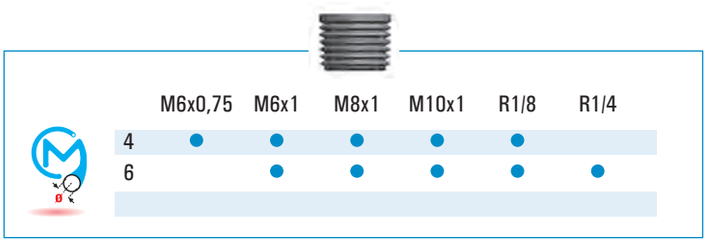
HP

1	2	3	4	5
Corpo Body Corps Körper	Viti Filettate Threaded Screws Filets Gewinde	Pinza aggraffaggio Gripping collet Pince Spannzange	Guarnizioni Seals Joint d'étancheité Dichtung	Seeger
Ottone UNI EN 12164 CW614N - UNI EN 12165 CW617N Nichelato Brass UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickel Plated Laiton UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickelé Messing UNI EN 12164 CW614N - UNI EN 12165 CW617N vernickelt	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel Plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt	Ottone UNI EN 12164 CW614N Brass UNI EN 12164 CW614N Laiton UNI EN 12164 CW614N Messing UNI EN 12164 CW 614N	NBR NBR NBR NBR	Acciao C75 Zincato C75 Steel zinc coated Acier C75 zingué C75 Stahl verzinkt

-20°C ÷ 80°C

Max 250 bar





SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA6-6 (4x1,5 – 6x3), Tubo per alte pressioni con terminale metallico.
Tolleranze accettabili sui tubi:
+/– 0,07 mm fino a Ø 6 mm.

Campi di applicazione:
Impianti di lubrificazione.

Il valore di massima pressione d'esercizio è influenzato dal tipo di tubo impiegato e dalla temperatura che può ridurre sensibilmente la pressione di scoppio del tubo.

DATA SHEET

Recommended tubings:
PA6-6 (4x1,5 – 6x3), High pressure tubing with metal stem.
Acceptable Tolerances on the tubings:
+/– 0,07 mm up to Ø 6 mm.

Application fields:
Lubrication installations.

The max pressure rate achievable can vary depending on the tubing used and on the room temperature. These two factors may in fact lower the tube bursting pressure.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
PA6-6 (4x1,5 – 6x3), Tube pour haute pression avec pièce métallique.
Tolerances sur les tubes:
+/– 0,07 mm jusqu'au Ø 6

Domaines d'application:
Système de graissage.

La valeur max. de la pression est en fonction du tube employé et de la température d'ambiance, éléments qui peuvent baisser la pression d'éclatement du tube.

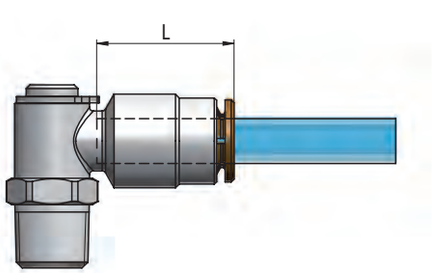
TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA6-6 (4x1,5 – 6x3), Hochdruckschlauch mit Metallstützen.
Schlauchtoleranzen:
+/– 0,07 mm bis Ø 6 mm.

Anwendungsbereiche:
Schmieranlagen

Der Druckbereich wird stark von den eingesetzten Schläuchen und Aussentemperaturen beeinflusst, die den Berstdruck des Schlauches reduzieren können.

Profondità di inserimento del tubo | Tubing insertion depth | Profondeur d'insertion du tube | Schlaucheinstecktiefe



Øe Tube	L
4	16
6	18,5

ISTRUZIONI DI MONTAGGIO

1. Tagliare il tubo a 90° (servendosi della pinza tagliatubo TCUT) verificando l'assenza di bave interne ed esterne e facendo attenzione che il tubo non si presenti ovalizzato dopo il taglio.
2. Inserire il tubo nel raccordo spingendolo fino in battuta.

Estrazione del tubo
Esercitare una leggera pressione sull'anello estrattore, estraendo contemporaneamente il tubo dal corpo del raccordo.

ASSEMBLY INSTRUCTIONS

1. Cut the tube square (by means of a hose cutter i.e. our TCUT) making sure that no burrs are left and that the tube is not oval.
2. Insert the tube into the fitting until it bottoms.

Tube release
While pressing on the release ring, pull out the tube from the fitting.

INSTRUCTIONS DE MONTAGE

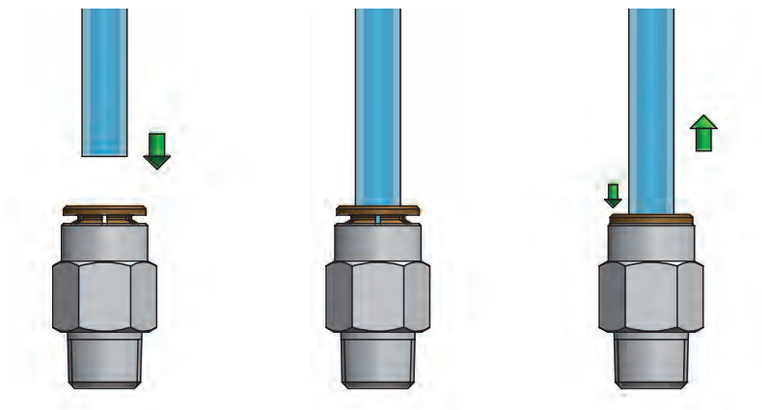
1. Sectionner le tube à 90° par notre coupe tube TCUT en prenant soin de ne par créer des bavures et de ne pas ovaliser le tube.
2. Pousser le tube jusqu' au fond du raccord.

Débranchement du tube
Appuyer sur le poussoir en métal et tirer simultanément sur le tube.

MONTAGEANWEISUNGEN

1. Schlauch mittels unserer Schlauchschere (TCUT) 90° abschneiden und entgraten.
2. Darauf achten, daß der Schlauch danach nicht oval gequetscht ist und dann ihn bis zum Verschraubungsanschlag einstecken.

Schlauchlösen
Auf den Druckring drücken und gleichzeitig den Schlauch rausziehen.



Effettuato il collegamento, assicurarsi che il tubo inserito nel raccordo non sia sottoposto ad alcuna forza di trazione; è necessario inoltre rispettare durante il collegamento del tubo il raggio minimo di curvatura consigliato così come riportato nella sezione tubi di questo catalogo tecnico (vedi pag. 363)
Al fine di evitare lo sgancio involontario del tubo nessun oggetto deve venire a contatto con l'anello estrattore del raccordo evitando così l'esercizio di qualsiasi forza indesiderata, anche solo laterale, che potrebbe causare la pressione dell'anello estrattore e conseguente rilascio del tubo.
Per il serraggio delle parti filettate del raccordo si raccomanda di attenersi alle coppie consigliate riportate a pag.6
Se il raccordo viene montato con un tubo in metallo, in caso di smontaggio, si sconsiglia l'impiego dello stesso raccordo con del tubo in plastica.

In caso di collegamento di un terminale metallico al raccordo, è necessario che il terminale presenti profilo e misure come consigliate di seguito. Se si collega al raccordo un terminale con caratteristiche differenti da quelle specificate, il raccordo potrebbe subire danneggiamenti irreversibili pertanto il funzionamento dello stesso non è più garantito.

Once the tubing is connected to the fitting, make sure that the tubing is not subject to any tensile strength and that the min. recommended bending radius stated in the tubing section of this catalogue is complied with (see page 363).
To prevent any accidental tube release, no components have to come in touch with the release ring and exercise any unwanted pressure on the same. Indeed however lateral, any load on the release ring may cause the tube disconnection.
To tighten threads, please check out our tightening torque chart illustrated at page 6.
Should the fitting be assembled with metal tubes, in case of disassembly, we do not recommend to reassemble the same fitting with plastic tubing.

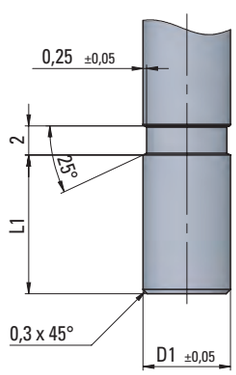
If a metal stem is connected to the fitting, the stem has to be manufactured according to the profile and sizes as set forth below. Should the fitting be connected to a metal stem not complying to the technical features recommended, the fitting may get irreversibly damaged and its function would no longer be guaranteed.

Une fois effectué le branchement, s'assurer que le tube inséré dans le raccord n'est soumis à aucune force de traction. Egalement, il est nécessaire de respecter, lors du branchement du tube, le rayon minimum de courbure conseillé dans la section tubes de ce catalogue technique (voir la page 363).
Afin d'éviter le décrochage involontaire du tube, aucun objet ne doit entrer en contact avec la bague d'extraction du raccord, empêchant ainsi l'exercice de toute force indésirable, ne serait-ce que latérale, qui pourrait provoquer la pression de la bague d'extraction et donc le relâchement du tube.
Pour le serrage des parties filetées du raccord, il est recommandé de s'en tenir aux couples de serrage conseillés et reportés à la page 6.
Un fois que le raccord a été monté avec un tuyau en métal, dans le cas d'un démontage, il n'est pas conseillé d'utiliser le même raccord avec un tube en plastique.

En cas de branchement d'une pièce métallique au raccord, il est nécessaire que la pièce présente un profil et des mesures comme conseillées ci-après. Si l'on connecte au raccord un terminal avec des caractéristiques différentes de celles spécifiées, le raccord pourrait subir des dommages irréversibles et le fonctionnement du même n'être donc plus garanti.

Nach der Schlauchverbindung, sicherstellen, dass der in die Verschraubung eingeführte Schlauch keinen Zugbelastungen ausgesetzt ist; beim Anschluss des Schlauchs muss der empfohlene Mindestbiegeradius eingehalten werden, gemäß den in diesem technischen Katalog im Schlauchabschnitt, angegebenen Hinweisen (siehe Seite 363).
Um das versehentliche Lösen des Schlauchs zu verhindern, darf kein Gegenstand den Lösering der Verschraubung berühren. Keine unerwünschte Kraft darf auch nicht seitlich einwirken und kein Druck soll auf den Lösering ausgeübt werden, denn dies das Schlauchlösen verursachen könnte.
Zum Festziehen der Gewinde sich an den, auf Seite 6, empfohlenen Drehmomente einhalten.
Ist die Verschraubung mit Metallrohr eingesetzt, so wird es nicht bei einer eventuellen Demontage, empfohlen die gleiche Verschraubung mit Kunsstoffschlauch wieder zu montieren.

Wenn die Verschraubung mit einem Metallstützen montiert wird, muss das Stützen, die im Nachstehenden empfohlenen Profile und Abmessungen aufweisen. Wenn das Metallstützen den angegebenen technischen Eigenschaften nicht entspricht, kann die Verschraubung sich dauerhaft beschädigen und wird dessen Funktion nicht mehr gewährleistet.



D_1	L_1
4	8
6	9,5

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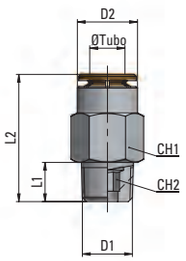
HP 11

Diritto maschio conico | Taper straight, male | Union simple mâle conique | Gerade Einschraubverschraubung, kegelig

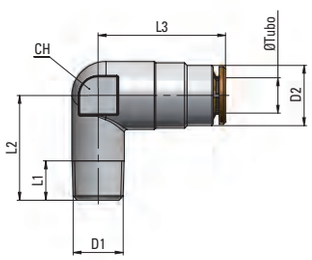


Type	Ø Tubo	D1	D2	L1	L2	CH1	CH2	g
11 04 18	4	R1/8	9,5	7,5	21	10	3	8,5
12 04 M6x0,75	4	M6x0,75	9,5	6	23	10	2,5	8,8
11 04 M6x1	4	M6x1	9,5	8	25	10	2,5	8,4
11 04 M8x1	4	M8x1	9,5	8	22,5	10	3	7,9
11 04 M10x1	4	M10x1	9,5	8	21	11	3	9,5
11 06 18	6	R1/8	11,5	7,5	24	12	4	11,5
11 06 14	6	R1/4	11,5	11	26	14	4	19
11 06 M6x1	6	M6x1	11,5	8	28	12	2,5	12,8
11 06 M8x1	6	M8x1	11,5	8	28	12	4	13,3
11 06 M10x1	6	M10x1	11,5	8	24,5	12	4	11,8

*M6x0,75 Filettatura Cilindrica - Parallel Thread - Filetage Cylindrique - Zylindrisch Gewinde

HP 14

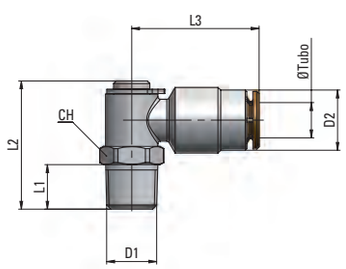
Gomito maschio conico | Taper elbow fitting, male | Raccord à coude mâle conique | Winkelverschraubung, kegelig



Type	Ø Tubo	D1	D2	L1	L2	L3	CH	g
14 04 18	4	R1/8	9,5	8	17	21,5	10	16
14 04 M6x1	4	M6x1	9,5	7	17	21,5	10	13,9
14 04 M8x1	4	M8x1	9,5	7	17	21,5	10	14,2
14 04 M10x1	4	M10x1	9,5	7	18	21,5	10	16,9
14 06 18	6	R1/8	11,5	7,5	20	24	11	21
14 06 M6x1	6	M6x1	11,5	7	20	24	11	19,8
14 06 M8x1	6	M8x1	11,5	7	20	24	11	19,8
14 06 M10x1	6	M10x1	11,5	7	21	24	11	22,7

HP 18

Gomito maschio cilindrico girevole | Parallel swivelling elbow, taper male | Raccord à coude tournant, mâle cylindrique | Schwenkbare Winkelverschraubung, zylindrisch

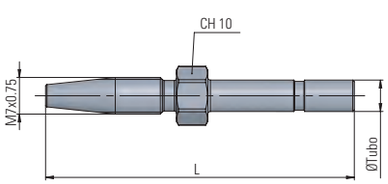


Type	Ø Tubo	D1	D2	L1	L2	L3	CH	g
18 04 18	4	R1/8	9,5	8,5	24,5	22	11	18,5
18 04 M6x0,75*	4	M6x0,75	9,5	6	22	22	11	16,8
18 04 M6x1	4	M6x1	9,5	8	24	22	11	16,9
18 04 M8x1	4	M8x1	9,5	8	24	22	11	17,4
18 04 M10x1	4	M10x1	9,5	8	25	22	11	18,9
18 06 18	6	R1/8	11,5	8,5	24,5	24	11	20,2
18 06 14	6	R1/4	11,5	11	28	24	14	25,5
18 06 M6x1	6	M6x1	11,5	8	24	24	11	18,6
18 06 M8x1	6	M8x1	11,5	8	24	24	11	19,5
18 06 M10x1	6	M10x1	11,5	8	25	24	11	21

*M6x0,75 Filettatura Cilindrica - Parallel Thread - Filetage Cylindrique - Zylindrisch Gewinde

HP 90

Terminale diritto | Hose connection, straight | Raccordement tube, droit | Gerade Schlauchverbindung

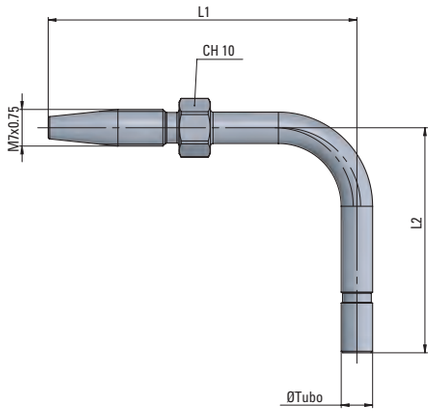


Type	Ø Tubo	L1	g
90 04 00	4	53	9,4
90 06 00	6	59	12,1

Corpo in Acciaio Zincato 11SMnPb37 - Body in Zinc plated steel 11SMnPb37 - Corps en Acier zingué 11SMnPb37 - Körper aus Stahl verzinkt 11SMnPb37

HP 92

Terminale 90° | 90° hose connection | Raccordement tube, 90° | 90° Schlauchverbindung

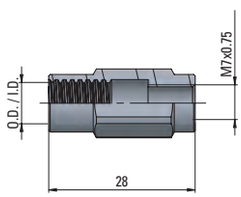


Type	Ø Tubo	L1	L2	g ⚖
new 92 06 00	6	59	43	17,6

Corpo in Acciaio Zincato 11SMnPb37 - Body in Zinc plated steel 11SMnPb37 - Corps en Acier zingué 11SMnPb37 - Körper aus Stahl verzinkt 11SMnPb37

HP 99

Boccola recuperabile | Reusable ferrule | Bague de fixation récupérable | Wiederverwendbare Hülse



Type	Tube OD	Tube ID	g ⚖
99 04 00	8÷8,3	5/32	12,4

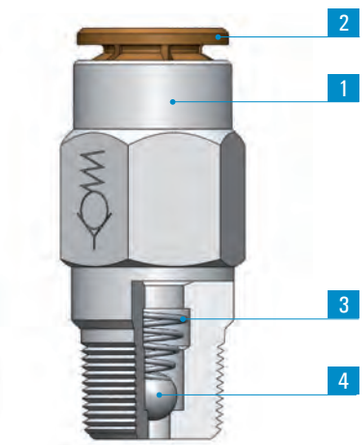
Corpo in Acciaio Zincato 11SMnPb37 - Body in Zinc plated steel 11SMnPb37 - Corps en Acier zingué 11SMnPb37 - Körper aus Stahl verzinkt 11SMnPb37

1	2	3	4
Corpo Body Corps Körper	Pinza aggraffaggio Gripping collet Pince Spannzange	Molla Spring Ressort Feder	Sfere Balls Billes Kugel
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel Plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt	Ottone UNI EN 12164 CW614N Brass UNI EN 12164 CW614N Laiton UNI EN 12164 CW614N Messing UNI EN 12164 CW 614N	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	Acciaio Inox AISI 420 Stainless Steel AISI 420 Acier Inox AISI 420 Edelstahl AISI 420

-20°C ÷ 80°C

40 ÷ 150 bar

3 bar



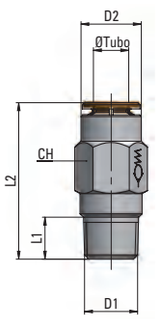
HP 11-NR

Valvola di non ritorno per 150 bar

Check valve for 150 bar

Clapet anti-retour pour 150 bar

Rückschlagventil für 150 bar



Type	Ø Tubo	D1	D2	L1	L2	CH	g
11 06 18 NR	**6**	**R1/8**	11,5	7,5	29,5	12	15,7
11 06 M10x1 NR	**6**	**M10x1**	11,5	8	29,5	12	15,9

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA6-6 (4x1,5 – 6x3), Tubo per alte pressioni con terminale metallico.
Tolleranze accettabili sui tubi:
+/– 0,07 mm fino a Ø 6 mm.

Campi di applicazione:
Impianti di lubrificazione.

Se il raccordo viene montato con un tubo in metallo, in caso di smontaggio, si sconsiglia l'impiego dello stesso raccordo con del tubo in plastica.

DATA SHEET

Recommended tubings:
PA6-6 (4x1,5 – 6x3), High pressure tubing with metal stem.
Acceptable Tolerances on the tubings:
+/– 0,07 mm up to Ø 6 mm.

Application fields:
Lubrication installations.

Should the fitting be assembled with metal tubes, in case of disassembly, we do not recommend to reassemble the same fitting with plastic tubing.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
PA6-6 (4x1,5 – 6x3), Tube pour haute pression avec pièce métallique.
Tolerances sur les tubes:
+/– 0,07 mm jusqu'au Ø 6

Domaines d'application:
Système de graissage.

Un fois que le raccord a été monté avec un tuyau en métal, dans le cas d'un démontage, il n'est pas conseillé d'utiliser le même raccord avec un tube en plastique.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA6-6 (4x1,5 – 6x3), Hochdruckschlauch mit Metallstützen.
Schlauchtoleranzen:
+/– 0,07 mm bis Ø 6 mm.

Anwendungsbereiche:
Schmieranlagen

Ist die Verschraubung mit Metallrohr eingesetzt, so wird es nicht bei einer eventuellen Demontage, empfohlen die gleiche Verschraubung mit Kunsstoffschlauch wieder zu montieren.

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MP LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi Automatici per Lubrificazione, 80 bar
Medium Pressure Push-in Fittings, 80 bar
Raccords Instantanés pour le graissage, 80 bar
Mitteldrucksteckverschraubungen, 80 bar

I

MP è un raccordo automatico concepito per impieghi fino a 80 bar nel campo della lubrificazione centralizzata.
Con il suo contenuto tecnico, la serie MP completa la gamma già esistente di raccordi per la lubrificazione ed offre continuità alle caratteristiche distintive dell'intera produzione Cmatic: rapidità di connessione, garanzia di prestazione ed affidabilità.

GB

MP is a push-in fitting conceived for Medium pressure grease applications up to max 80 bar.
MP completes, with its technical features the exhisting products offer for central lubrication applications and highlights further the distinguishing marks of the whole Cmatic production: quick connections, performance and reliance guarantee.

F

MP est un raccord instantané conçu pour garantir la connection jusqu'à 80 bar dans le domaine du graissage centralisé.
Cette série complète avec ses caractéristiques techniques la gamme de lubrification centralisée tout en gardant
les signes distinctifs de la production Cmatic: rapidité de connection, garantie de performance et de fiabilité.

D

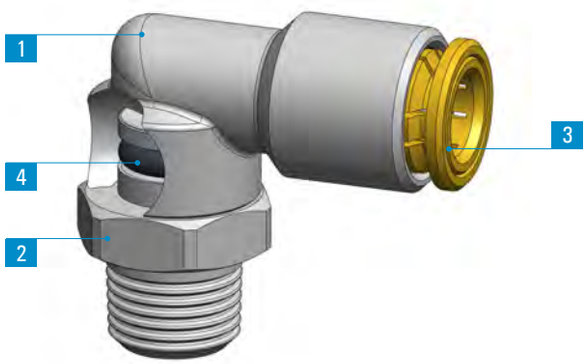
MP ist eine Steckverschraubung, geeignet für Mitteldruck bis 80 bar im Bereich Zentralschmierung.
MP (als zusätzliche Variante) ergänzt mit ihren technischen Eigenschaften die schon bestehende Verschraubungspalette für Zentralschmierung und setzt die Unterscheidungsmerkmale der Cmatic Herstellung fort und zwar schnelle Verbindungfähigkeit, Leistung und Zuverlässigkeit.

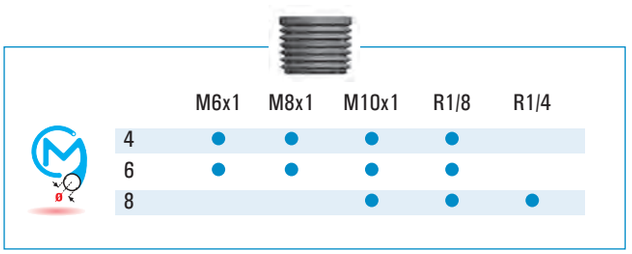
MP

1	2	3	4
Corpo Body Corps Körper	Viti Filettate Threaded Screws Filets Gewinde	Pinza aggraffaggio Gripping collet Pince Spannzange	Guarnizioni Seals Joint d'étancheité Dichtung
Ottone UNI EN 12164 CW614N - UNI EN 12165 CW617N Nichelato Brass UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickel Plated Laiton UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickelé Messing UNI EN 12164 CW614N - UNI EN 12165 CW617N vernickelt	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel Plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt	Ottone UNI EN 12164 CW614N Brass UNI EN 12164 CW614N Laiton UNI EN 12164 CW614N Messing UNI EN 12164 CW 614N	NBR NBR NBR NBR

-20°C ÷ 80°C

Max 80 bar





	M6x1	M8x1	M10x1	R1/8	R1/4
4	●	●	●	●	
6	●	●	●	●	
8			●	●	●

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA6-6 (4x1,5 – 6x3), PA12 HR
Tolleranze accettabili sui tubi:
+/– 0,07 mm fino a Ø 8 mm.

Campi di applicazione:
Impianti di lubrificazione.

Il valore di massima pressione d'esercizio è influenzato dal tipo di tubo impiegato e dalla temperatura che può ridurre sensibilmente la pressione di scoppio del tubo.

DATA SHEET

Recommended tubings:
PA6-6 (4x1,5 – 6x3), PA12 HR
Acceptable Tolerances on the tubings:
+/– 0,07 mm up to Ø 8 mm.

Application fields:
Lubrication installations.

The max pressure rate achievable can vary depending on the tubing used and on the room temperature. These two factors may in fact lower the tube bursting pressure.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
PA6-6 (4x1,5 – 6x3), PA12 HR
Tolerances sur les tubes:
+/– 0,07 mm jusqu'au Ø 8 mm

Domaines d'application:
Système de graissage.

La valeur max. de la pression est en fonction du tube employé et de la température d'ambiance, éléments qui peuvent baisser la pression d'éclatement du tube.

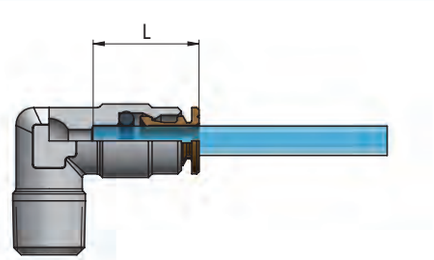
TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA6-6 (4x1,5 – 6x3), PA12 HR
Schlauchtoleranzen:
+/– 0,07 mm bis Ø 8 mm.

Anwendungsbereiche:
Schmieranlagen

Der Druckbereich wird stark von den eingesetzten Schläuchen und Aussentemperaturen beeinflusst, die den Berstdruck des Schlauches reduzieren können.

Profondità di inserimento del tubo | Tubing insertion depth | Profondeur d'insertion du tube | Schlaucheinstecktiefe



Øe Tube	L
4	14,5
6	17
8	17

ISTRUZIONI DI MONTAGGIO

1. Tagliare il tubo a 90° (servendosi della pinza tagliatubo TCUT) verificando l'assenza di bave interne ed esterne e facendo attenzione che il tubo non si presenti ovalizzato dopo il taglio.
2. Inserire il tubo nel raccordo spingendolo fino in battuta.

Estrazione del tubo
Esercitare una leggera pressione sull'anello estrattore, estraendo contemporaneamente il tubo dal corpo del raccordo.

ASSEMBLY INSTRUCTIONS

1. Cut the tube square (by means of a hose cutter i.e. our TCUT) making sure that no burrs are left and that the tube is not oval.
2. Insert the tube into the fitting until it bottoms.

Tube release
While pressing on the release ring, pull out the tube from the fitting.

INSTRUCTIONS DE MONTAGE

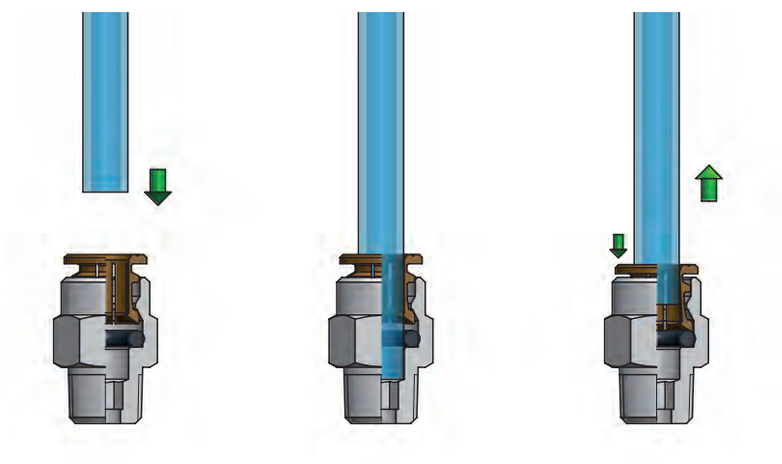
1. Sectionner le tube à 90° par notre coupe tube TCUT en prenant soin de ne par créer des bavures et de ne pas ovaliser le tube.
2. Pousser le tube jusqu' au fond du raccord.

Débranchement du tube
Appuyer sur le poussoir en métal et tirer simultanément sur le tube.

MONTAGEANWEISUNGEN

1. Schlauch mittels unserer Schlauchschere (TCUT) 90° abschneiden und entgraten.
2. Darauf achten, daß der Schlauch danach nicht oval gequetscht ist und dann ihn bis zum Verschraubungsanschlag einstecken.

Schlauchlösen
Auf den Druckring drücken und gleichzeitig den Schlauch rausziehen.



Effettuato il collegamento, assicurarsi che il tubo inserito nel raccordo non sia sottoposto ad alcuna forza di trazione; è necessario inoltre rispettare durante il collegamento del tubo il raggio minimo di curvatura consigliato così come riportato nella sezione tubi di questo catalogo tecnico (vedi pag. 363)
Al fine di evitare lo sgancio involontario del tubo nessun oggetto deve venire a contatto con l'anello estrattore del raccordo evitando così l'esercizio di qualsiasi forza indesiderata, anche solo laterale, che potrebbe causare la pressione dell'anello estrattore e conseguente rilascio del tubo.
Per il serraggio delle parti filettate del raccordo si raccomanda di attenersi alle coppie consigliate riportate a pag.6

Once the tubing is connected to the fitting, make sure that the tubing is not subject to any tensile strength and that the min. recommended bending radius stated in the tubing section of this catalogue is complied with (see page 363).
To prevent any accidental tube release, no components have to come in touch with the release ring and exercise any unwanted pressure on the same. Indeed however lateral, any load on the release ring may cause the tube disconnection.
To tighten threads, please check out our tightening torque chart illustrated at page 6.

Une fois effectué le branchement, s'assurer que le tube inséré dans le raccord n'est soumis à aucune force de traction. Egalement, il est nécessaire de respecter, lors du branchement du tube, le rayon minimum de courbure conseillé dans la section tubes de ce catalogue technique (voir la page 363).
Afin d'éviter le décrochage involontaire du tube, aucun objet ne doit entrer en contact avec la bague d'extraction du raccord, empêchant ainsi l'exercice de toute force indésirable, ne serait-ce que latérale, qui pourrait provoquer la pression de la bague d'extraction et donc le relâchement du tube.
Pour le serrage des parties filetées du raccord, il est recommandé de s'en tenir aux couples de serrage conseillés et reportés à la page 6.

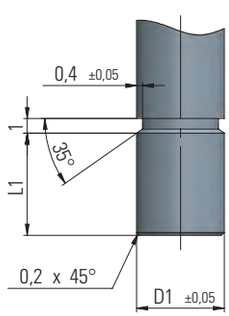
Nach der Schlauchverbindung, sicherstellen, dass der in die Verschraubung eingeführte Schlauch keinen Zugbelastungen ausgesetzt ist; beim Anschluss des Schlauchs muss der empfohlene Mindestbiegeradius eingehalten werden, gemäß den in diesem technischen Katalog im Schlauchabschnitt, angegebenen Hinweisen (siehe Seite 363).
Um das versehentliche Lösen des Schlauchs zu verhindern, darf kein Gegenstand den Lösering der Verschraubung berühren. Keine unerwünschte Kraft darf auch nicht seitlich einwirken und kein Druck soll auf den Lösering ausgeübt werden, denn dies das Schlauchlösen verursachen könnte.
Zum Festziehen der Gewinde sich an den, auf Seite 6, empfohlenen Drehmomente einhalten.

In caso di collegamento di un terminale metallico al raccordo, è necessario che il terminale presenti profilo e misure come consigliate di seguito. Se si collega al raccordo un terminale con caratteristiche differenti da quelle specificate, il raccordo potrebbe subire danneggiamenti irreversibili pertanto il funzionamento dello stesso non è più garantito.

If a metal stem is connected to the fitting, the stem has to be manufactured according to the profile and sizes as set forth below. Should the fitting be connected to a metal stem not complying to the technical features recommended, the fitting may get irreversibly damaged and its function would no longer be guaranteed.

En cas de branchement d'une pièce métallique au raccord, il est nécessaire que la pièce présente un profil et des mesures comme conseillées ci-après. Si l'on connecte au raccord un terminal avec des caractéristiques différentes de celles spécifiées, le raccord pourrait subir des dommages irréversibles et le fonctionnement du même n'être donc plus garanti.

Wenn die Verschraubung mit einem Metallstützen montiert wird, muss das Stützen, die im Nachstehenden empfohlenen Profile und Abmessungen aufweisen. Wenn das Metallstützen den angegebenen technischen Eigenschaften nicht entspricht, kann die Verschraubung sich dauerhaft beschädigen und wird dessen Funktion nicht mehr gewährleistet.



D_1	L_1
4	6
6	7
8	7

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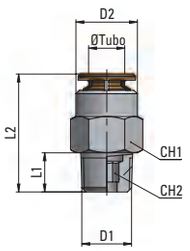
MP 11

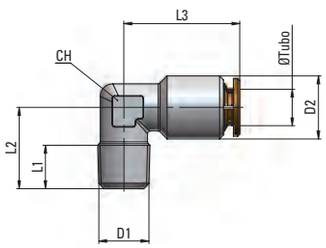
Diritto maschio conico | Taper straight, male | Union simple mâle conique | Gerade Einschraubverschraubung, kegelig



Type	Ø Tubo	D1	D2	L1	L2	CH1	CH2	g
11 04 18	4	R1/8	9	7,5	18,5	10	3	7,3
11 04 M6x1	4	M6x1	9	8	23,2	10	2,5	7,6
11 04 M8x1	4	M8x1	9	8	20	10	3	6,7
11 04 M10x1	4	M10x1	9	8	20	11	3	9,3
11 06 18	6	R1/8	11,8	7,5	22	12	4	10,3
11 06 M6x1	6	M6x1	11,8	8	26	12	2,5	11,8
11 06 M8x1	6	M8x1	11,8	8	26	12	4	12,3
11 06 M10x1	6	M10x1	11,8	8	22,5	12	4	10,9
11 08 18	8	R1/8	13,8	7,5	25	14	5	15,4
11 08 14	8	R1/4	13,8	11	25	14	6	16,4
11 08 M10x1	8	M10x1	13,8	8	25,5	14	5	16,4

MP 14

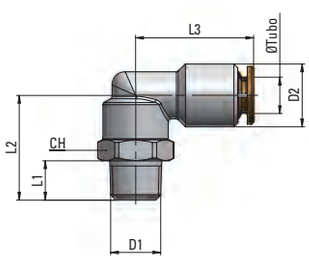
Gomito maschio conico | Taper elbow fitting, male | Raccord à coude mâle conique | Winkelverschraubung, kegelig



Type	Ø Tubo	D1	D2	L1	L2	L3	CH	g
14 04 18	4	R1/8	9	8,3	15,5	20	10	12,6
14 04 M6x1	4	M6x1	9	9	17	20	10	13,3
14 04 M8x1	4	M8x1	9	10	17	20	10	13,4
14 04 M10x1	4	M10x1	9	9	18	20	10	14,3
14 06 18	6	R1/8	12	8,3	15,5	21,5	10	14,2
14 06 M6x1	6	M6x1	12	9	17	21,5	10	14,6
14 06 M8x1	6	M8x1	12	10	17	21,5	10	14,8
14 06 M10x1	6	M10x1	12	9	18	21,5	10	15,8
14 08 18	8	R1/8	14	10,5	19	23	12	21,1
14 08 14	8	R1/4	14	10,6	20	23	12	23,9
14 08 M10x1	8	M10x1	14	9	19	23	12	22,1

MP 15

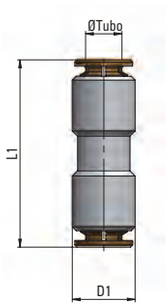
Gomito maschio conico girevole | Taper swivelling elbow fitting, male | Raccord à coude tournant, mâle conique | Schwenkbare Winkelverschraubung, kegelig



Type	Ø Tubo	D1	D2	L1	L2	L3	CH	g
15 04 18	4	R1/8	9	7,5	20	20	13	21,9
15 04 M6x1	4	M6x1	9	8	20,5	20	13	19,9
15 04 M8x1	4	M8x1	9	8	20,5	20	13	20,7
15 04 M10x1	4	M10x1	9	8	21,5	20	13	23,4
15 06 18	6	R1/8	12	7,5	20	22	13	24,2
15 06 M6x1	6	M6x1	12	8	20,5	22	13	21,7
15 06 M8x1	6	M8x1	12	8	20,5	22	13	22,6
15 06 M10x1	6	M10x1	12	8	21,5	22	13	25,8
15 08 18	8	R1/8	14	7,5	20,5	22,5	13	28,3
15 08 14	8	R1/4	14	11	24	22,5	14	35,8
15 08 M10x1	8	M10x1	14	8	22	22,5	13	29,9

MP 26

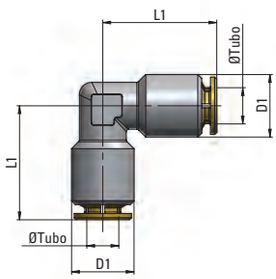
Giunzione intermedia | Union | Union simple égale | Gerade Verbindung



Type	Ø Tubo	D1	L1	g
26 04 04	4	9	30	10,7
26 06 06	6	12	34,5	15,7
26 08 08	8	14	35	20,2

MP 28

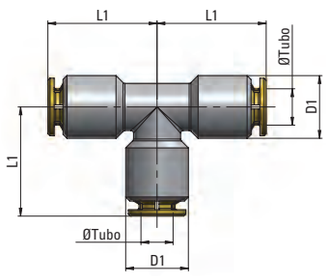
Gomito intermedio | Union elbow | Raccord à coude | Winkelverschraubung



Type	Ø Tubo	D1	L1	g
28 04 04	**4**	9	20	15,8
28 06 06	**6**	12	22,5	18,9
28 08 08	**8**	14	23	25,3

MP 29

T intermedio | Union tee | T égal | T-Verschraubung



Type	Ø Tubo	D1	L1	g
29 04 04	**4**	9	19,5	21,3
29 06 06	**6**	12	20,5	24,8
29 08 08	**8**	14	21,5	31,7

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PM LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi Automatici per Lubrificazione in Pollici/NPT, 80 bar
Medium Pressure Push-in Fittings, 80 bar Inch/NPT
Raccords Instantanés pour le graissage, 80 bar Pouce/NPT
Mitteldrucksteckverschraubungen, 80 bar Zoll/NPT

I

I Raccordi Automatici della serie PM, conformi allo Standard Americano (tubi in Pollici e filettatura NPT-UNF), sono concepiti per impieghi fino a 80 bar nel campo della lubrificazione centralizzata.

GB

The push-in fittings of the PM line are manufactured according to the American Standards (inch Tubings and NPT threads).They are conceived to work up to 80 bar in central grease applications.

F

Les raccords de la série PM, conformes aux standards américains, (tuyaux en pouces et filetage en NPT) sont réalisés pour le graissage centralisé et une pression jusqu'à 80 bar.

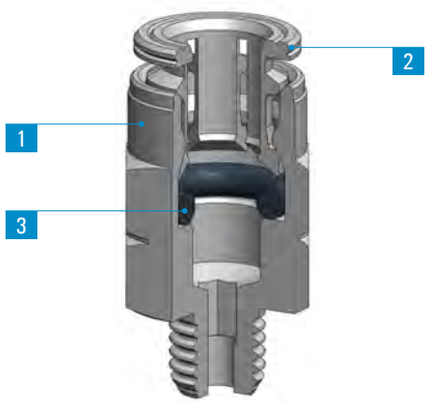
D

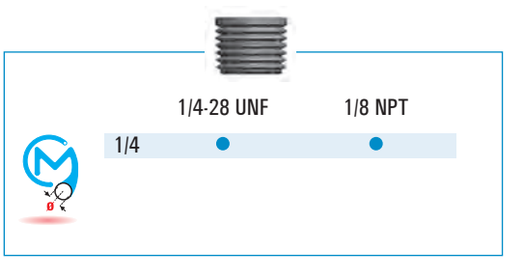
Die PM Baureihe, gemäß der amerikanischen Vorschriften hergestellt, (zöllige Schläuche und NPT Gewinden) ist für Anwendungen bis 80 bar im Bereich Zentralschmieranlagen entwickelt.

PM

1	2	3
Corpo Body Corps Körper	Pinza aggraffaggio Gripping collet Pince Spannzange	Guarnizioni Seals Joint d'étancheité Dichtung
Ottone UNI EN 12164 CW614N - UNI EN 12165 CW617N Nichelato Brass UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickel Plated Laiton UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickelé Messing UNI EN 12164 CW614N - UNI EN 12165 CW617N vernickelt	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel Plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt	NBR NBR NBR NBR

-20°C ÷ 80°C Max 80 bar





SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA6-6, PA12 HR
Tolleranze accettabili sui tubi:
+/– 0,07 mm fino a Ø 1/4.

Campi di applicazione:
Impianti di lubrificazione.

Il valore di massima pressione d'esercizio è influenzato dal tipo di tubo impiegato e dalla temperatura che può ridurre sensibilmente la pressione di scoppio del tubo.

DATA SHEET

Recommended tubings:
PA6-6, PA12 HR
Acceptable Tolerances on the tubings:
+/– 0,07 mm up to Ø 1/4.

Application fields:
Lubrication installations.

The max pressure rate achievable can vary depending on the tubing used and on the room temperature. These two factors may in fact lower the tube bursting pressure.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
PA6-6, PA12 HR
Tolerances sur les tubes:
+/– 0,07 mm jusqu'au Ø 1/4

Domaines d'application:
Système de graissage.

La valeur max. de la pression est en fonction du tube employé et de la température d'ambiance, éléments qui peuvent baisser la pression d'éclatement du tube.

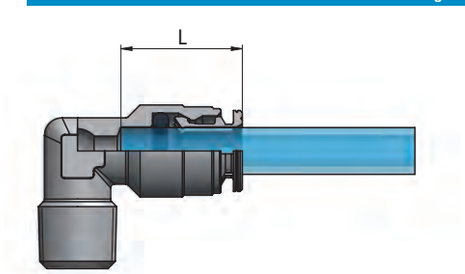
TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA6-6, PA12 HR
Schlauchtoleranzen:
+/– 0,07 mm bis Ø 1/4.

Anwendungsbereiche:
Schmieranlagen.

Der Druckbereich wird stark von den eingesetzten Schläuchen und Aussentemperaturen beeinflusst, die den Berstdruck des Schlauches reduzieren können.

Profondità di inserimento del tubo | Tubing insertion depth | Profondeur d'insertion du tube | Schlaucheinstecktiefe



Øe Tube	L
1/4	17

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ISTRUZIONI DI MONTAGGIO

1. Tagliare il tubo a 90° (servendosi dellapinza tagliatubo TCUT) verificando l'assenza di bave interne ed esterne e facendo attenzione che il tubo non si presenti ovalizzato dopo il taglio.
2. Inserire il tubo nel raccordo spingendolo fino in battuta.

Estrazione del tubo
Esercitare una leggera pressione sull'anello estrattore, estraendo contemporaneamente il tubo dal corpo del raccordo.

ASSEMBLY INSTRUCTIONS

1. Cut the tube square (by means of a hose cutter i.e. our TCUT) making sure that no burrs are left and that the tube is not oval.
2. Insert the tube into the fitting until it bottoms.

Tube release
While pressing on the release ring, pull out the tube from the fitting.

INSTRUCTIONS DE MONTAGE

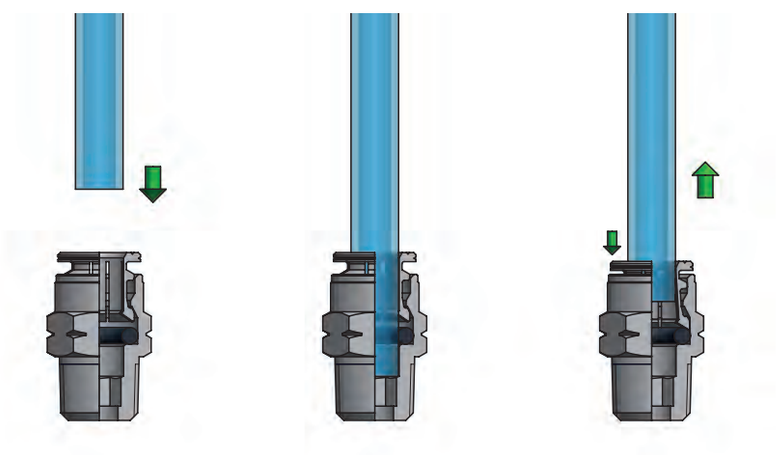
1. Sectionner le tube à 90° par notre coupe tube TCUT en prenant soin de ne par créer des bavures et de ne pas ovaliser le tube.
2. Pousser le tube jusqu' au fond du raccord.

Débranchement du tube
Appuyer sur le poussoir en métal et tirer simultanément sur le tube.

MONTAGEANWEISUNGEN

1. Schlauch mittels unserer Schlauchschere (TCUT) 90° abschneiden und entgraten.
2. Darauf achten, daß der Schlauch danach nicht oval gequetscht ist und dann ihn bis zum Verschraubungsanschlag einstecken.

Schlauchlösen
Auf den Druckring drücken und gleichzeitig den Schlauch rausziehen.



Effettuato il collegamento, assicurarsi che il tubo inserito nel raccordo non sia sottoposto ad alcuna forza di trazione; è necessario inoltre rispettare durante il collegamento del tubo il raggio minimo di curvatura consigliato così come riportato nella sezione tubi di questo catalogo tecnico (vedi pag. 363).
Al fine di evitare lo sgancio involontario del tubo nessun oggetto deve venire a contatto con l'anello estrattore del raccordo evitando così l'esercizio di qualsiasi forza indesiderata, anche solo laterale, che potrebbe causare la pressione dell'anello estrattore e conseguente rilascio del tubo.
Per il serraggio delle parti filettate del raccordo si raccomanda di attenersi alle coppie consigliate riportate a pag.6

Once the tubing is connected to the fitting, make sure that the tubing is not subject to any tensile strength and that the min. recommended bending radius stated in the tubing section of this catalogue is complied with (see page 363).
To prevent any accidental tube release, no components have to come in touch with the release ring and exercise any unwanted pressure on the same. Indeed however lateral, any load on the release ring may cause the tube disconnection.
To tighten threads, please check out our tightening torque chart illustrated at page 6.

Une fois effectué le branchement, s'assurer que le tube inséré dans le raccord n'est soumis à aucune force de traction. Egalement, il est nécessaire de respecter, lors du branchement du tube, le rayon minimum de courbure conseillé dans la section tubes de ce catalogue technique (voir la page 363).
Afin d'éviter le décrochage involontaire du tube, aucun objet ne doit entrer en contact avec la bague d'extraction du raccord, empêchant ainsi l'exercice de toute force indésirable, ne serait-ce que latérale, qui pourrait provoquer la pression de la bague d'extraction et donc le relâchement du tube.
Pour le serrage des parties filetées du raccord, il est recommandé de s'en tenir aux couples de serrage conseillés et reportés à la page 6.

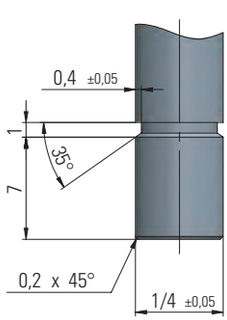
Nach der Schlauchverbindung, sicherstellen, dass der in die Verschraubung eingeführte Schlauch keinen Zugbelastungen ausgesetzt ist; beim Anschluss des Schlauchs muss der empfohlene Mindestbiegeradius eingehalten werden, gemäß den in diesem technischen Katalog im Schlauchabschnitt, angegebenen Hinweisen (siehe Seite 363).
Um das versehentliche Lösen des Schlauchs zu verhindern, darf kein Gegenstand den Lösering der Verschraubung berühren. Keine unerwünschte Kraft darf auch nicht seitlich einwirken und kein Druck soll auf den Lösering ausgeübt werden, denn dies das Schlauchlösen verursachen könnte.
Zum Festziehen der Gewinde sich an den, auf Seite 6, empfohlenen Drehmomente einhalten.

In caso di collegamento di un terminale metallico al raccordo, è necessario che il terminale presenti profilo e misure come consigliate di seguito. Se si collega al raccordo un terminale con caratteristiche differenti da quelle specificate, il raccordo potrebbe subire danneggiamenti irreversibili pertanto il funzionamento dello stesso non è più garantito.

If a metal stem is connected to the fitting, the stem has to be manufactured according to the profile and sizes as set forth below. Should the fitting be connected to a metal stem not complying to the technical features recommended, the fitting may get irreversibly damaged and its function would no longer be guaranteed.

En cas de branchement d'une pièce métallique au raccord, il est nécessaire que la pièce présente un profil et des mesures comme conseillées ci-après. Si l'on connecte au raccord un terminal avec des caractéristiques différentes de celles spécifiées, le raccord pourrait subir des dommages irréversibles et le fonctionnement du même n'être donc plus garanti.

Wenn die Verschraubung mit einem Metallstützen montiert wird, muss das Stützen, die im Nachstehenden empfohlenen Profile und Abmessungen aufweisen. Wenn das Metallstützen den angegebenen technischen Eigenschaften nicht entspricht, kann die Verschraubung sich dauerhaft beschädigen und wird dessen Funktion nicht mehr gewährleistet.



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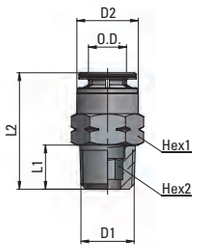
PM 11

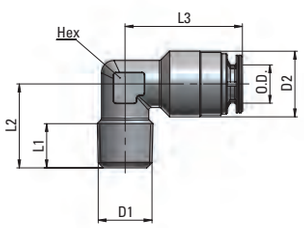
Diritto maschio conico | Taper straight, male | Union simple mâle conique | Gerade Einschraubverschraubung, kegelig



Type	Ø Tubo	D1 UNF	D1 NPTF	D2	L1	L2	HEX1	HEX2	g
11 1/4 1/8	**1/4**	-	**1/8**	11,8	8,5	22	12	5	9,3
11 1/4 1/4-28	**1/4**	**1/4-28**	-	11,8	6	24	12	2,5	10,9

PM 14

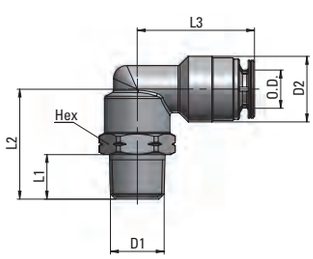
Gomito maschio conico | Taper elbow fitting, male | Raccord à coude mâle conique | Winkelverschraubung, kegelig



Type	Ø Tubo	D1 UNF	D1 NPTF	D2	L1	L2	L3	HEX	g
14 1/4 1/8	**1/4**	-	**1/8**	12,5	8,4	16	22	10	15,1
14 1/4 1/4-28	**1/4**	**1/4-28**	-	12,5	7	15	22	10	14,9

PM 15

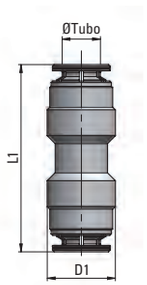
Gomito maschio conico girevole | Taper swivelling elbow fitting, male | Raccord à coude tournant, mâle conique | Schwenkbare Winkelverschraubung, kegelig



Type	Ø Tubo	D1 UNF	D1 NPTF	D2	L1	L2	L3	CH	g
15 1/4 1/8	**1/4**	-	**1/8**	12,5	8,5	21	22	13	24,4
15 1/4 1/4-28	**1/4**	**1/4-28**	-	12,5	6	18,5	22	13	21,2

PM 26

Giunzione intermedia | Union | Union simple égale | Gerade Verbindung



Type	Ø Tubo1	Ø Tubo2	D1	L1	g
26 1/4 1/4	**1/4**	**1/4**	13	34,5	16,9

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MM LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi Automatici per la Nebulizzazione in Pollici/NPT, 80 bar
Misting Push-in Fittings, 80 bar Inch/NPT
Raccords Instantanés pour la brumisation, 80 bar Pouce/NPT
Zerstäubungsverschraubungen, 80 bar Zoll/NPT

I

MM è la nuova gamma di raccordi per la nebulizzazione.
Cmatic mette in campo tutta la sua esperienza e know-how nella raccorderia automatica per alte pressioni, applicandola tuttavia a finalità ben diverse da quelle della pneumatica ovvero per creare l'effetto "misting".
L'acqua, pressurizzata a 80 bar, fuoriesce dagli speciali ugelli come nebbia ultrafine in milioni di goccioline, creando un'ampia cortina di aria fresca attorno all'area specifica. Questa tecnica consente, con un grande risparmio energetico e senza inquinare, di effettuare, in ambito industriale e non, il controllo degli odori, l'abbattimento delle polveri, il raffrescamento degli ambienti interni ed esterni e l'umidificazione.

GB

MM is our new line of misting fittings.
Cmatic are now using all their know-how and experience in high pressure connections for a completely new purpose. To create "Misting".
Water at 80 bar pressure is channelled through hoses and sprayed through nozzles as millions of very fine mist drops, creating that way a refreshing effect all around a specific area.
Misting, as a cost effective, energy saving and non polluting technique is used both in industrial and commercial fields to control odours and humidity, to set dusts, to cool down indoor and outdoor temperatures.

F

La nouvelle gamme de brumisation s'appelle MM. Cmatic applique cette fois son experience et know-how dans le domaine des connections à haute pression pour un but bien différent. La brumisation. L'eau, pressurisée à 80 bar, canalisée dans des tubes et aspersée par des buses de diamètre très fin sort comme une brume de micro particules d'eau et va créer un effet rafraichissant très agréable sur la surface interne ou externe que l'on veut brumiser. C'est l'un de système les plus économiques en termes d'énergie et non polluant. Grace à ça la brumisation est une technique diffusée de plus en plus dans des domaines industrielles et non, comme pour le rafraichissement de milieux internes et externes, control des odeurs, abattement des poussières et control de l'humidité.

D

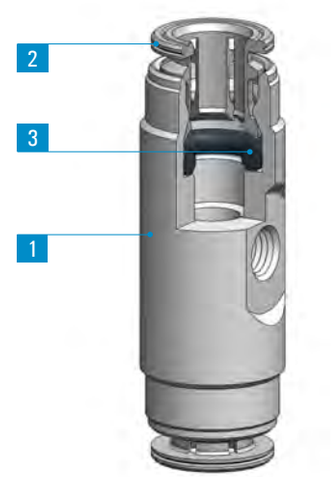
MM ist die neue Serie von Zerstäubungsverschraubungen.
Cmatic setzt seine langjährige Erfahrung in der Hochdrucktechnik in einem ganz neuen Bereich ein und zwar in der Wasserzerstäubungstechnik, weltweit bekannt als Nebulisierung.
Hierbei wird 80 bar druckfestes Wasser von fein gebohrten Düsen in winzigen Wasserpartikel zerstäubt. Ein angenehmes Erfrischungseffekt wird dabei rund um das aussen oder internes Milieu sofort erzeugt.
Es ist eine umweltfreundliche und energiesparende Technik, die immer mehr in Industriebereichen wie bei Geruchskontrolle, Staubabbau, Luftbefeuchtung und Temperaturabkühlung Anwedung findet.

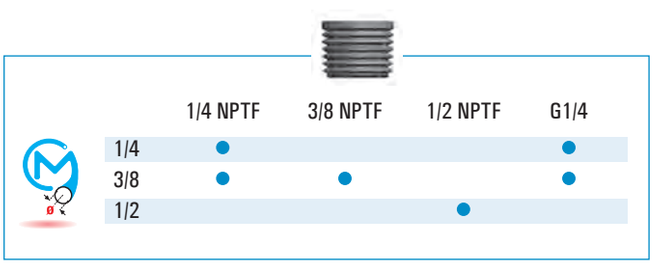
MM

1	2	3
Corpo Body Corps Körper	Pinza aggraffaggio Gripping ring Pince Spannzange	Guarnizioni Seals Joint d'étancheité Dichtung
Ottone UNI EN 12164 CW614N - UNI EN 12165 CW617N Nichelato Brass UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickel Plated Laiton UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickelé Messing UNI EN 12164 CW614N - UNI EN 12165 CW617N vernickelt	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel Plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt	NBR NBR NBR NBR

-20°C ÷ 80°C

Max 80 bar





SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA12 HR
Tolleranze accettabili sui tubi:
+/– 0,07 mm fino a Ø 3/8"
+/– 0,01 mm fino a Ø 1/2

Campi di applicazione:
Impianti di Nebulizzazione

DATA SHEET

Recommended tubings:
PA12 HR
Acceptable Tolerances on the tubings:
+/– 0,07 mm up to Ø 3/8"
+/– 0,01 mm up to Ø 1/2"

Application fields:
Misting circuits

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
PA12 HR
Tolerances sur les tubes:
+/– 0,07 mm jusqu'au Ø 3/8"
+/– 0,01 mm jusqu'au Ø 1/2"

Domaines d'application:
Circuits de brumisation

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA12 HR
Schlauchtoleranzen:
+/– 0,07 mm bis Ø 3/8"
+/– 0,01 mm bis Ø 1/2"

Anwendungsbereiche:
Nebulisierungsanlagen

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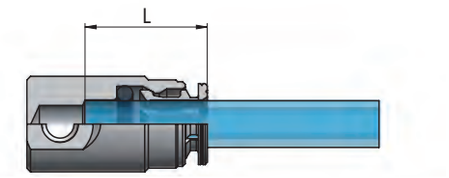
Profondità di inserimento del tubo | Tubing insertion depth | Profondeur d'insertion du tube | Schlaucheinstecktiefe



Øe Tube	L
1/4	17
3/8	18,5
1/2	20,4

ISTRUZIONI DI MONTAGGIO

1. Tagliare il tubo a 90° (servendosi della pinza tagliatubo TCUT) verificando l'assenza di bave interne ed esterne e facendo attenzione che il tubo non si presenti ovalizzato dopo il taglio.
2. Inserire il tubo nel raccordo spingendolo fino in battuta.

Estrazione del tubo
Esercitare una leggera pressione sull'anello estrattore, estraendo contemporaneamente il tubo dal corpo del raccordo.

ASSEMBLY INSTRUCTIONS

1. Cut the tube square (by means of a hose cutter i.e. our TCUT) making sure that no burrs are left and that the tube is not oval.
2. Insert the tube into the fitting until it bottoms.

Tube release
While pressing on the release ring, pull out the tube from the fitting.

INSTRUCTIONS DE MONTAGE

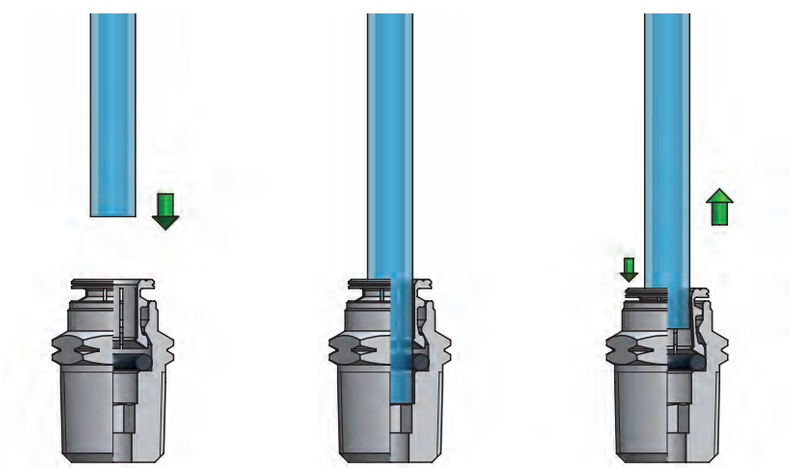
1. Sectionner le tube à 90° par notre coupe tube TCUT en prenant soin de ne par créer des bavures et de ne pas ovaliser le tube.
2. Pousser le tube jusqu' au fond du raccord.

Débranchement du tube
Appuyer sur le poussoir en métal et tirer simultanément sur le tube.

MONTAGEANWEISUNGEN

1. Schlauch mittels unserer Schlauchschere (TCUT) 90° abschneiden und entgraten.
2. Darauf achten, daß der Schlauch danach nicht oval gequetscht ist und dann ihn bis zum Verschraubungsanschlag einstecken.

Schlauchlösen
Auf den Druckring drücken und gleichzeitig den Schlauch rausziehen.



Effettuato il collegamento, assicurarsi che il tubo inserito nel raccordo non sia sottoposto ad alcuna forza di trazione; è necessario inoltre rispettare durante il collegamento del tubo il raggio minimo di curvatura consigliato così come riportato nella sezione tubi di questo catalogo tecnico (vedi pag. 363).
Al fine di evitare lo sgancio involontario del tubo nessun oggetto deve venire a contatto con l'anello estrattore del raccordo evitando così l'esercizio di qualsiasi forza indesiderata, anche solo laterale, che potrebbe causare la pressione dell'anello estrattore e conseguente rilascio del tubo.
Per il serraggio delle parti filettate del raccordo si raccomanda di attenersi alle coppie consigliate riportate a pag.6

Once the tubing is connected to the fitting, make sure that the tubing is not subject to any tensile strength and that the min. recommended bending radius stated in the tubing section of this catalogue is complied with (see page 363).
To prevent any accidental tube release, no components have to come in touch with the release ring and exercise any unwanted pressure on the same. Indeed however lateral, any load on the release ring may cause the tube disconnection.
To tighten threads, please check out our tightening torque chart illustrated at page 6.

Une fois effectué le branchement, s'assurer que le tube inséré dans le raccord n'est soumis à aucune force de traction. Egalement, il est nécessaire de respecter, lors du branchement du tube, le rayon minimum de courbure conseillé dans la section tubes de ce catalogue technique (voir la page 363).
Afin d'éviter le décrochage involontaire du tube, aucun objet ne doit entrer en contact avec la bague d'extraction du raccord, empêchant ainsi l'exercice de toute force indésirable, ne serait-ce que latérale, qui pourrait provoquer la pression de la bague d'extraction et donc le relâchement du tube.
Pour le serrage des parties filetées du raccord, il est recommandé de s'en tenir aux couples de serrage conseillés et reportés à la page 6.

Nach der Schlauchverbindung, sicherstellen, dass der in die Verschraubung eingeführte Schlauch keinen Zugbelastungen ausgesetzt ist; beim Anschluss des Schlauchs muss der empfohlene Mindestbiegeradius eingehalten werden, gemäß den in diesem technischen Katalog im Schlauchabschnitt, angegebenen Hinweisen (siehe Seite 363).
Um das versehentliche Lösen des Schlauchs zu verhindern, darf kein Gegenstand den Lösering der Verschraubung berühren. Keine unerwünschte Kraft darf auch nicht seitlich einwirken und kein Druck soll auf den Lösering ausgeübt werden, denn dies das Schlauchlösen verursachen könnte.
Zum Festziehen der Gewinde sich an den, auf Seite 6, empfohlenen Drehmomente einhalten.

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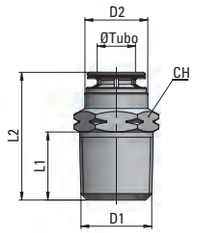
MM 11

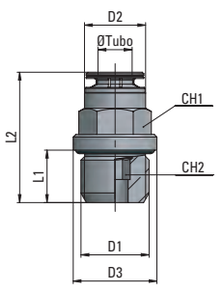
Diritto maschio conico | Taper straight, male | Union simple mâle conique | Gerade Einschraubverschraubung, kegelig



	Type	Ø Tubo	D_1	D_2	L_1	L_2	CH	g
	11 1/4 1/4	**1/4**	**1/4**	12	13	24,5	14	16,6
	11 3/8 1/4	**3/8**	**1/4**	15,8	13	29	16	19,5
	11 3/8 3/8	**3/8**	**3/8**	16	13	28	18	30,1
new	**11 1/2 1/2**	**1/2**	**1/2**	19	17	33	22	52,8

MM 12

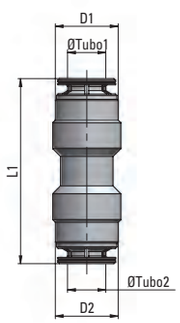
Diritto maschio cilindrico | Parallel straight, male | Union simple mâle cylindrique | Gerade Einschraubverschraubung, zylindrisch



	Type	Ø Tubo	D_1	D_2	D_3	L_1	L_2	CH_1	CH_2	g
new	**12 1/4 G1/4**	**1/4**	**G1/4**	11,7	16	10	24,9	12	5	15,8
new	**12 3/8 G1/4**	**3/8**	**G1/4**	15,8	16,5	10	31,2	15	7	21,7

MM 26

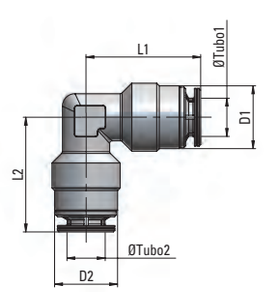
Giunzione intermedia | Union | Union simple égale | Gerade Verbindung



	Type	Ø $Tubo_1$	Ø $Tubo_2$	D_1	D_2	L_1	g
	26 1/4 1/4	**1/4**	**1/4**	12	12	35,5	17
	26 1/4 3/8	**1/4**	**3/8**	12	16	37,5	24,1
	26 3/8 3/8	**3/8**	**3/8**	16	16	38,6	26,8
new	**26 3/8 1/2**	**3/8**	**1/2**	17	19,5	41,3	38,3
new	**26 1/2 1/2**	**1/2**	**1/2**	19,5	19,5	43	39,9

MM 28

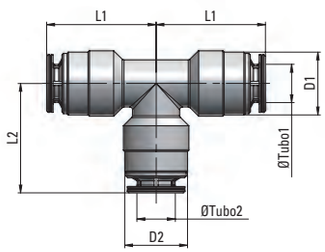
Gomito intermedio | Union elbow | Raccord à coude | Winkelverschraubung



	Type	Ø $Tubo_1$	Ø $Tubo_2$	D_1	D_2	L_1	L_2	g
	28 1/4 1/4	**1/4**	**1/4**	12	12	22	22	18
	28 3/8 3/8	**3/8**	**3/8**	16	16	25,5	25,5	35,1
new	**28 1/2 1/2**	**1/2**	**1/2**	19,5	19,5	29,5	29,5	57,9

MM 29

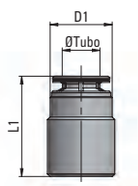
T intermedio | Union tee | T égal | T-Verschraubung



	Type	Ø Tubo1	Ø Tubo2	D1	D2	L1	L2	g
	29 1/4 1/4	**1/4**	**1/4**	12	12	21	21	23,5
	29 3/8 3/8	**3/8**	**3/8**	16	16	25	25	47,4
new	**29 1/2 3/8**	**1/2**	**3/8**	19,5	16	28,5	27	72,6
new	**29 1/2 1/2**	**1/2**	**1/2**	19,5	19,5	28,5	28,5	73,1

MM 40

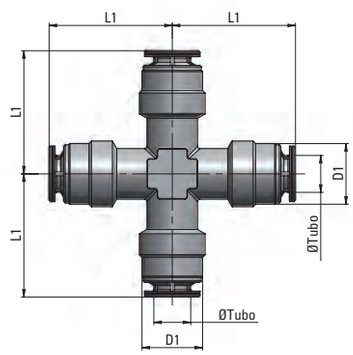
Terminale | Terminal | Raccord terminal | Endverschraubung



	Type	Ø Tubo	D1	L1	g
	40 00 1/4	**1/4**	12	19,5	11,9
	40 00 3/8	**3/8**	16	21,5	19,8
new	**40 00 1/2**	**1/2**	19,5	24,5	29,3

MM 46

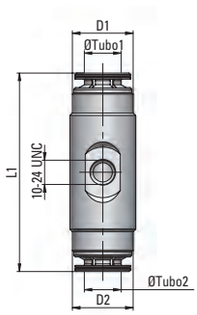
Croce | Cross fitting | Raccord à croix | Kreuzstück



Type	Ø Tubo	D1	L1	g
46 00 1/4	**1/4**	12	22	41,6
46 00 3/8	**3/8**	16	25,5	70,7

MM 60

Giunzione intermedia con attacco per ugello | Union with nozzle port | Union simple avec filétage buse | Gerade Steckverbider mit Düsegewinde



Type	Ø Tubo1	Ø Tubo2	D1	D2	L1	g
60 1/4 1/4	**1/4**	**1/4**	12	12	39,5	23,2
60 3/8 3/8	**3/8**	**3/8**	16	16	44	37,5

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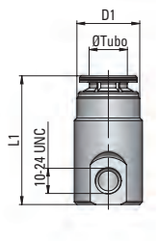
MM 61

Raccordo terminale con attacco per ugello

Terminal with nozzle port

Raccord terminal avec filétage buse

Endverschraubung mit Düsegewinde



Type	Ø Tubo	D1	L1	g ⚖
61 00 1/4	**1/4**	12	24,5	15,8
61 00 3/8	**3/8**	16	26,5	25,4

MM 99

Ugello

Nozzle

Buse

Düse

Type	D1 UNC	D2	g ⚖
99 10-24 ø0,15	10-24	0,15	9,9
99 10-24 ø0,20	10-24	0,2	9,9
99 10-24 ø0,30	10-24	0,3	9,9
99 10-24 ø0,40	10-24	0,4	9,9

Gli ugelli con foro 0,15 e 0,20 vengono generalmente utilizzati per il raffrescamento (sia in ambito civile che in zootecnia) mentre gli ugelli con foro da 0,30 e 0,40 vengono utilizzati soprattutto per l'abbattimento delle polveri, degli odori e per l'umidificazione.

The nozzles with hole 0.15 and 0.20 are generally used for cooling purposes (both in civil and in animal applications), while 0.30 and 0.40 are used primarily for dust, odors suppression and for moisturizing.

Les buses à trou 0,15 et 0,20 sont généralement utilisés pour le rafraichissement (tant en matière civile que dans l'élevage), tandis à 0,30 et 0,40 sont utilisés principalement pour l' élimination de la poussière, des odeurs et pour le control de l'humidité.

Die Düsen mit Bohrung 0,15 und 0,20 sind in der Regel für die Kühlung (sowohl bei Zivil- als auch bei Tieranwendugen) verwendet, während 0,30 und 0,40 bei Staub, schlechte Gerücheabbau und zur Befeuchtung eingesetzt sind.

Portata d'acqua per diametro di ugello al variare della pressione

Water flow rate per nozzle size and water pressure

Débit de l'eau pour taille de buse et pression de l'eau

Wasserdurchfluss je nach Düsegrösse und Wasserdruck

orifice size in mm	35 bar 500 psi	45 bar 640 psi	**70 bar 1000 psi**	84 bar 1200 psi	
0,15	0,0330 0,0087	0,0380 0,0100	**0,0460** **0,0122**	0,0510 0,0133	l/min USGpm
0,2	0,0568 0,0153	0,0643 0,0175	**0,0787** **0,0208**	0,0980 0,0258	l/min USGpm
0,3	0,0790 0,0205	0,0867 0,0235	**0,1080** **0,0290**	0,1590 0,0420	l/min USGpm
0,4	0,1048 0,0282	0,1190 0,0322	**0,1483** **0,0398**	0,1950 0,0515	l/min USGpm

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MT LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi Automatici per gli Impianti Frenanti
Push-in Fittings for Air Brake Systems
Raccords Instantanés pour Systèmes de Freinage Pneumatique
Steckverschraubungen für Druckluftbremssysteme

I

I raccordi automatici della Serie MT sono la soluzione di Cmatic per gli impianti frenanti dei veicoli industriali e commerciali.
Interamente in ottone, la serie MT coniuga qualità e prestazioni ottimali nel tempo ed elevata affidabilità e sicurezza del prodotto.
Tutti i raccordi della serie MT hanno ottenuto la certificazione TÜV secondo gli standard DIN 74324:1996, DIN EN ISO 9227:2017 e 60068-2-6:2008.

GB

The push-in fittings of the MT Line are completely made of brass and they are Cmatic solution for industrial and commercial vehicles air brake systems. This line combines high quality standards, outstanding performances over time, which then translate into a product highly reliable and safe.
All MT fittings are TÜV certified according to DIN 74324:1996, DIN EN ISO 9227:2017 e 60068-2-6:2008.

F

Les raccords instantanés de la gamme MT sont entièrement en laiton et sont la solution de Cmatic pour les systèmes de freinage à air des véhicules industriels et commerciaux. Cette gamme combine une qualité élevées, des performances exceptionnelles dans le temps, qui se traduisent par un produit hautement fiable et sûr.
Tous les raccords MT sont certifiés TÜV selon la norme DIN 74324: 1996, DIN EN ISO 9227: 2017 e 60068-2-6: 2008.

D

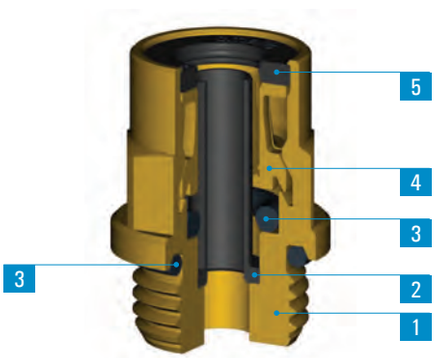
Die Steckverschraubungen der MT-Serie, die vollständig aus Messing bestehen, sind Cmatic-Lösung für die Bremssysteme von Industrie- und Nutzfahrzeugen. Diese Serie kombiniert Qualität und optimale Leistungen im Laufe der Zeit, was sich in der hohen Zuverlässigkeit des Produkts niederschlägt.
Alle MT Verschraubungen sind gemäß den Normen nach DIN 74324: 1996, DIN EN ISO 9227: 2017 und 60068-2-6: 2008 TÜV- zertifiziert erhalten.

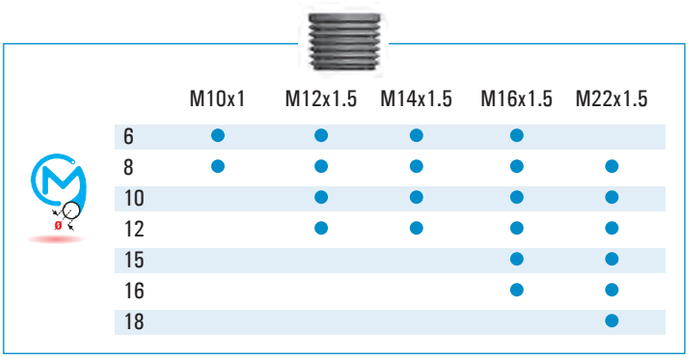
MT

1	2	3	4	5
Corpo Body Corps Körper	Guida Tubo Tubing guide Guide de tube Schlauchführung	Guarnizione Seal Joint d'étanchéité Dichtung	Pinza di Aggraffaggio Gripping ring Pince Spannzange	Anello Parapolvere Dust Cover ring Bague Protection Poussières Staub-schützring
Ottone UNI EN 12164 CW614N - UNI EN 12165 CW617N Brass UNI EN 12164 CW614N - UNI EN 12165 CW617N Laiton UNI EN 12164 CW614N - UNI EN 12165 CW617N Messing UNI EN 12164 CW614N - UNI EN 12165 CW617N	Ø 6-8-10-12: PA 6.6 Ø 15-16-18: Ottone, Brass, Laiton, Messing UNI EN 12164 CW614N	NBR (bassa temperatura) NBR (low temperature) NBR (basse température) NBR (niedrige Temperatur)	Ottone UNI EN 12164 CW614N Brass UNI EN 12164 CW614N Laiton UNI EN 12164 CW614N Messing UNI EN 12164 CW614N	EPDM EPDM EPDM EPDM

-50°C ÷ 100°C

0 – 16 bar





	M10x1	M12x1.5	M14x1.5	M16x1.5	M22x1.5
6	●	●	●	●	
8	●	●	●	●	●
10		●	●	●	●
12		●	●	●	●
15				●	●
16				●	●
18					●

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
Tubi in Poliammide 12 flessibile secondo normativa DIN 74324 e DIN 73378*
Tolleranze accettabili sui tubi:
Secondo normativa DIN 74324 e DIN 73378

Campi di applicazione:
Sistemi frenanti dei veicoli commerciali e industriali

* Vedi pag.354

DATA SHEET

Recommanded hoses:
Flexible Polyamide 12 tubings according to DIN 74324 and DIN 73378*
Acceptable hose tolerances:
According to DIN 74324 and DIN 73378

Application fields:
Air Brake Systems for Commercial and Industrial Vehicles

*See page 354

REINSEIGNEMENTS TECHNIQUES

Tuyaux conseillés:
Polyamide 12 flexible réalisé selon la norme DIN 74324 et DIN 73378 *
Tolérances tuyaux permises:
Selon la norme DIN 74324 et DIN 73378

Domaines d'emploi:
Systèmes de freinage pour véhicules industriels et commerciaux

* Plus d'informations à la page 354

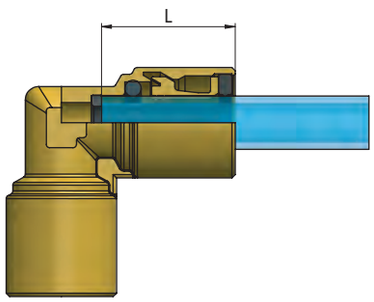
TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Polyamid 12 flexibel gemäss DIN Norm 74324 und DIN 73378 *
Akzeptierete Schlauchtoleranze:
gemäß DIN 74324 und DIN 73378

Anwendungsbereiche:
Bremsanlagen für Industrie und Nutzfahrzeuge

*Siehe Seite 354

Profondità di inserimento del tubo | Tubing insertion depth | Profondeur d'insertion du tube | Schlaucheinstecktiefe



Øe Tubo	L
6	20
8	20
10	21.9
12	22.3
15	24.9
16	24.9
18	26.4

MONTAGGIO DEL TUBO

1. Tagliare il tubo a 90° con l'utensile TCUT (vedi sezione Tools di questo catalogo) verificando l'assenza di bave interne ed esterne e facendo attenzione che il tubo non si presenti ovalizzato dopo il taglio.
2. Inserire il tubo nel raccordo spingendolo fino in battuta.

Estrazione del tubo
Per scollegare il tubo dal raccordo utilizzare l'apposito utensile TREL.
Identificare sul TREL il diametro corrispondente al tubo da rimuovere; sovrapporre TREL al parapolvere ed esercitare sull'utensile una pressione uniforme. estraendo al contempo il tubo dal corpo del raccordo.

ASSEMBLY INSTRUCTIONS

1. Cut the tube at 90° by means of the "TCUT" tool (for more info please check out the Tools section in this catalogue) making sure that no burrs are left and that the tube is not oval after cutting.
2. Insert the tube into the fitting by pushing until it bottoms.

Tube release
Disconnect the tube by means of the tube release tool TREL.
Select the right tube size section of the tool; lay the TREL over the dust cover ring; apply a uniform pressure on the dust cover ring and pull the tube out.

INSTRUCTIONS DE MONTAGE

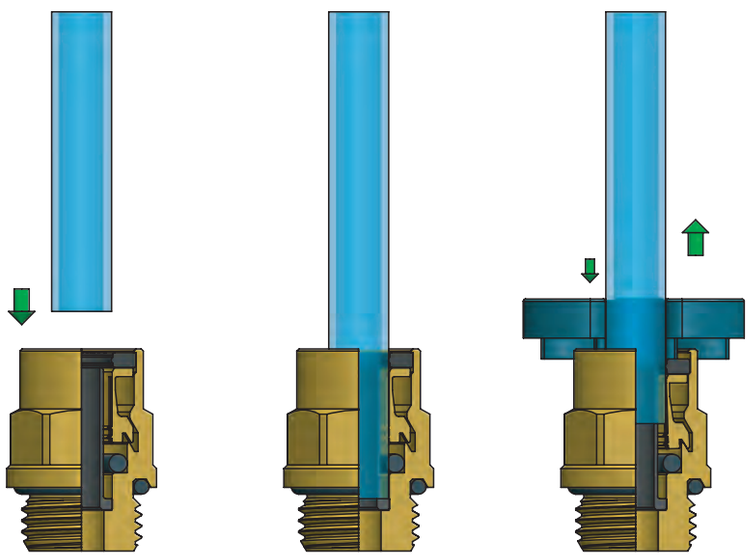
1. Coupez le tube avec l'outil TCUT à 90° (Tous renseignements sur le TCUT sont dans la section Tools de ce catalogue). Vérifiez que le tube ne soit pas ovalisé et qu'il n'y ait pas de bavures.
2. Insérez le tube jusqu'au fond du raccord.

Débranchement du tube
Utilisez l'outil TREL pour détacher le tube.
Choisir sur l'outil TREL la taille de tuyau correct et placez- le sur la bague protection poussières.
Appliquer une pression uniforme sur la bague de protection poussières tout en tirant sur le tube.

MONTAGEANLEITUNGEN

1. Schlauch mit TCUT Schlauchschere 90° abschneiden und entgraten.(weitere Auskünfte über TCUT sind im Katalogsbschnitt TOOLS zu finden). Darauf achten, dass der Schlauch nach dem Schneiden nicht oval gequetscht ist.
2. Schlauch bis zum Verschraubungsanschlag einstecken.

Schlauchlösen
Zum Schlauchlösen, das TREL Werkzeug verwenden.
Den ensprechenden Schlauchgrösseabschnitt vom TREL wählen und TREL auf den Staubschützring legen.
Gleichmässigen Druck auf dem Staubschützring üben und gleichzeitig den Schlauch ziehen.



TREL
Utensile rilascio Tubo
Tube release tool
Outil débranchement tube
Werkzeug zum Schlauchlösen

Dimension 1	Dimension 2
Da 6 mm a 12 mm	Da 15 mm a 12 mm
From 6 mm to 12 mm	From 15 mm to 18 mm
De 6 mm à 12 mm	De 15 mm à 18 mm
Von 6 mm bis 12 mm	Von 15 mm bis 18 mm

Non rimuovere il tubo dal raccordo se ancora in pressione.
Per il serraggio delle parti filettate del raccordo, si raccomanda di attenersi alle coppie di serraggio riportate nella pagina seguente;
È raccomandabile che le operazioni di connessione e disconnessione vengano effettuate da personale qualificato.

Do not release the tube if still under pressure.
To tighten all threaded parts pls follow instructions related to the torque forces stated in the following page.
It is recommended that all connections and disconnections operations are performed by trained personnel.

Ne pas débrancher le tube si encore sous pression.
Pour serrer toutes les pièces filetées, suivez les instructions données à la page suivante sur les couples de serrage.
Il est recommandé que le montage et le démontage du tube soit fait par du personnel qualifié.

Schlauch nicht lösen wenn noch unter Druck.
Zum Festziehen aller Gewindeteile bitte die Anweisungen zu den auf der folgenden Seite angegebenen Drehmomentkräften einhalten.
Es wird empfohlen, dass Schlauchmontagen und Demontagen von ausgebildetem Personal durchgeführt werden.

ASSEMBLAGGIO DEI RACCORDI:

1. Svitare completamente il controdado. Questa operazione deve avvenire manualmente senza l'utilizzo di utensili di serraggio.
2. Avvitare manualmente il raccordo nel filetto femmina fino a che l'oring entri in contatto con la sede della femmina.
3. Orientare il raccordo nella posizione desiderata, accertando di non superare la rotazione di 180 ° in senso orario e antiorario.
4. Una volta raggiunta la posizione corretta, tenere fermo il raccordo con una mano e serrare il controdado usando una chiave di serraggio. Per questa operazione attenersi alle forze di serraggio raccomandate di seguito.
5. L'operazione di assemblaggio è completata.

FITTINGS ASSEMBLY:

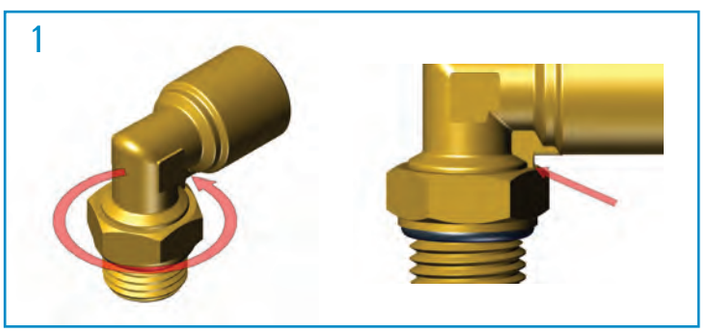
1. Loosen the counter-nut completely. This operation has to be done manually. No asssembly tools are needed.
2. Manually assemble the fitting into the female port until it bottoms and the fitting Oring is in touch with the female port.
3. Orientate the fitting into the desidered position, making sure not to exceed 180° rotation clockwise and anti-clockwise.
4. Once the right position is reached, hold the fitting with one hand and tighten the fitting counter-nut by means of a wrench, following the torque forces stated below.
5. At this stage the assembly operation is completed.

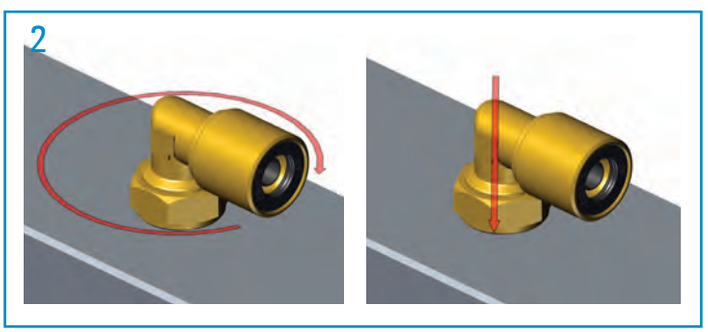
RENSEIGNEMENTS POUR LE MONTAGE DU RACCORD

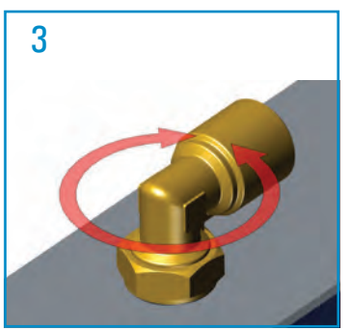
1. Dévissez complètement le contre-écrou. Cette opération doit être effectuée manuellement, sans utiliser des outils de serrage.
2. Montez manuellement le raccord dans le filetage femelle jusqu'à le joint torique est en contact avec le siège femelle.
3. Orientez le raccord dans la position souhaitée, sans dépasser 180 ° dans le sens horaire et anti-horaire.
4. Une fois atteinte la position correcte, maintenez fermement le raccord d'une main et serrez le contre-écrou à l'aide d'une clé de serrage tout en suivant les couples de serrage recommandées ci-dessous.
5. L'opération d'assemblage est terminée.

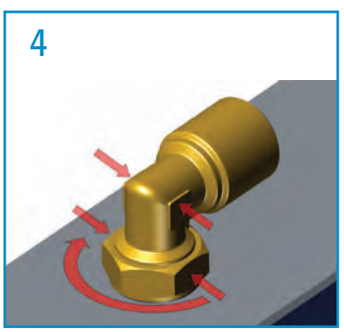
ANWEISUNGEN ZUR MONTAGE DER VERSCHRAUBUNG

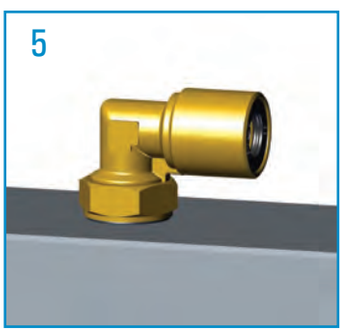
1. Kontermutter vollständig lösen. Dieser Vorgang muss manuell ohne Verwendung von Spannwerkzeugen durchgeführt werden.
2. die Verschraubung manuell im Innengewinde montieren, bis der O-Ring den Innensitz berührt.
3. die Verschraubung in die gewünschte Position orientieren und darauf achten, dass die Drehung im und gegen Uhrzeigsinn 180 ° nicht überschreitet.
4. Wenn die richtige Position erreicht wird, die Verschraubung mit einer Hand festhalten und die Kontermutter mit einem Schlüssel festziehen. Dabei bitte die unten angegebenen empfohlenen Anzugskraftkräfte einhalten.
5. Der Montagevorgang ist abgeschlossen.











Type	Nm
M10x1	14
M12x1,5	19
M14x1,5	23
M16x1,5	30
M22x1,5	34

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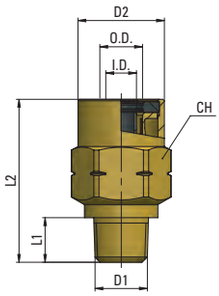
MT 11

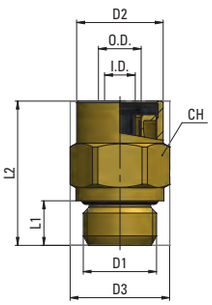
Diritto maschio conico | Taper straight, male | Union simple mâle conique | Gerade Einschraubverschraubung, kegelig



	Type	Tubo OD	Tubo ID	D1 NPTF	D2	L1	L2	CH	g
new	**11 06 18 NPTF**	**6**	**4**	1/8	14,5	8,5	27	15	18,3
new	**11 08 18 NPTF**	**8**	**6**	1/8	16,5	8,5	31,1	17	26,4

MT 12

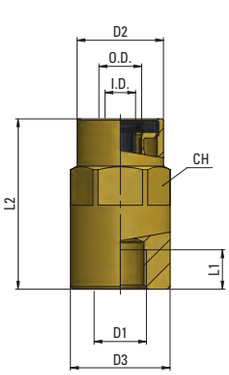
Diritto maschio cilindrico | Parallel straight, male | Union simple mâle cylindrique | Gerade Einschraubverschraubung, zylindrisch



	Type	Tubo OD	Tubo ID	D1	D2	D3	L1	L2	CH	g
new	**12 06 M10x1**	**6**	**4**	M10x1	14,5	17	7	26	15	17,7
new	**12 06 M12x1,5**	**6**	**4**	M12x1,5	14,5	17	8,5	27,5	15	20,4
new	**12 06 M14x1,5**	**6**	**4**	M14x1,5	14,5	17	8,5	27	15	23,8
new	**12 06 M16x1,5**	**6**	**4**	M16x1,5	14,5	20	8,5	25	15	25,9
new	**12 08 M10x1**	**8**	**6**	M10x1	16,5	19	7	31	17	27,6
new	**12 08 M12x1,5**	**8**	**6**	M12x1,5	16,5	19	8,5	32,5	17	29,9
new	**12 08 M14x1,5**	**8**	**6**	M14x1,5	16,5	19	8,5	27,5	17	24,8
new	**12 08 M16x1,5**	**8**	**6**	M16x1,5	16,5	20	8,5	27	17	27,8
new	**12 08 M22x1,5**	**8**	**6**	M22x1,5	16,5	25,5	8,5	23	17	39,4
new	**12 10 M12x1,5**	**10**	**8**	M12x1,5	18,5	21	8,5	34,7	19	35,7
new	**12 10 M14x1,5**	**10**	**8**	M14x1,5	18,5	21	8,5	34,7	19	39,9
new	**12 10 M16x1,5**	**10**	**8**	M16x1,5	18,5	22	8,5	29,5	20	27,8
new	**12 10 M22x1,5**	**10**	**8**	M22x1,5	18,5	25,5	8,5	25,5	20	42,9
new	**12 12 M12x1,5**	**12**	**9**	M12x1,5	20,5	23	8,5	35,5	21	40,4
new	**12 12 M14x1,5**	**12**	**9**	M14x1,5	20,5	23	8,5	35,5	21	43
new	**12 12 M16x1,5**	**12**	**9**	M16x1,5	20,5	23	8,5	34,5	21	45
new	**12 12 M22x1,5**	**12**	**9**	M22x1,5	20,5	25,5	8,5	27,5	21	44
new	**12 15 M16x1,5**	**15**	**12**	M16x1,5	25	28	8,5	37,7	25	66,4
new	**12 15 M22x1,5**	**15**	**12**	M22x1,5	25	28,5	8,5	32,2	26	65,9
new	**12 16 M16x1,5**	**16**	**12**	M16x1,5	26	29	8,5	37,7	26	69,1
new	**12 16 M22x1,5**	**16**	**12**	M22x1,5	26	30	8,5	32,2	27	66,4
new	**12 18 M22x1,5**	**18**	**14**	M22x1,5	28	31,5	8,5	39,2	29	92,2

MT 13

Diritto femmina | Female straight | Union simple femelle | Gerade Aufschraubverschraubung



	Type	Tubo OD	Tubo ID	D1	D2	D3	L1	L2	CH	g
new	**13 06 M10x1**	**6**	**4**	M10x1	14,5	17	7,5	32,5	15	36,3
new	**13 06 M16x1,5**	**6**	**4**	M16x1,5	14,5	20	10	37	15	45,2
new	**13 08 M10x1**	**8**	**6**	M10x1	16,5	19	7,5	32,5	17	45,3

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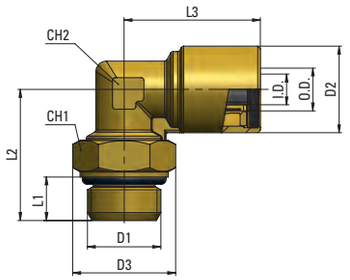
MT 16

Gomito maschio cilindrico orientabile

Orientable elbow fitting, male parallel

Raccord à coude tournant, mâle cylindrique

Schwenkbare Winkelverschraubung, zylindrisch



	Type	Tubo OD	Tubo ID	D_1	D_2	D_3	L_1	L_2	L_3	CH_1	CH_2	g
new	16 06 M10x1	6	4	M10x1	14,5	16,2	6,3	19,5	25	14	9	24,5
new	16 06 M12x1,5	6	4	M12x1,5	14,5	17,3	8,3	23,75	25	15	9	30,2
new	16 06 M14x1,5	6	4	M14x1,5	14,5	19,6	8,3	23,5	25	17	9	33,4
new	16 06 M16x1,5	6	4	M16x1,5	14,5	22	8,3	24	26	19	11	32,1
new	16 08 M10x1	8	6	M10x1	16,5	16,2	6,3	20,5	26	14	11	30,1
new	16 08 M12x1,5	8	6	M12x1,5	16,5	17,3	8,3	24,5	26	15	11	35,1
new	16 08 M14x1,5	8	6	M14x1,5	16,5	19,6	8,3	25	26	17	11	38
new	16 08 M16x1,5	8	6	M16x1,5	16,5	22	8,3	24,5	26	19	11	42,7
new	16 08 M22x1,5	8	6	M22x1,5	18,5	31,2	8,1	26,5	26	27	15	82
new	16 10 M12x1,5	10	8	M12x1,5	18,5	17,3	8,3	25,5	29,3	15	13	44,9
new	16 10 M14x1,5	10	8	M14x1,5	18,5	19,6	8,3	26	29,3	17	13	45,8
new	16 10 M16x1,5	10	8	M16x1,5	18,5	22	8,3	26	29,3	19	13	27,8
new	16 10 M22x1,5	10	8	M22x1,5	18,5	31,2	8,1	26,5	30,3	27	15	77,8
new	16 12 M12x1,5	12	9	M12x1,5	21	17,3	8,3	26,7	31	15	15	58,4
new	16 12 M14x1,5	12	9	M14x1,5	21	19,6	8,3	26,8	31	17	15	58,3
new	16 12 M16x1,5	12	9	M16x1,5	21	22	8,3	27,7	31	19	15	60,9
new	16 12 M22x1,5	12	9	M22x1,5	21	31,2	8,1	27,3	31	27	15	80,9
new	16 15 M16x1,5	15	12	M16x1,5	27	22	8,3	30,2	37	19	19	113,8
new	16 15 M22x1,5	15	12	M22x1,5	27	31,2	8,1	30,5	37	27	19	133,8
new	16 16 M16x1,5	16	12	M16x1,5	27	22	8,3	30,2	37,5	19	19	108,4
new	16 16 M22x1,5	16	12	M22x1,5	27	31,2	8,1	30,5	37,5	27	19	125,8
new	16 18 M22x1,5	18	14	M22x1,5	29	31,2	8,1	32,5	39	27	21	139

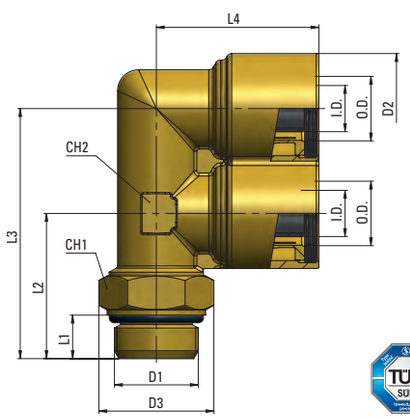
MT 16-D

Gomito maschio cilindrico orientabile doppio

Double orientable elbow fitting, male parallel

Raccord à coude tournant double, mâle cylindrique

Schwenkbarwinkelverschraubung, doppel, zylindrisch



	Type	Tubo OD	Tubo ID	D_1	D_2	D_3	L_1	L_2	L_3	L_4	CH_1	CH_2	g
new	16 12 M16x1,5-D	12	9	M16x1,5	21	22	8,3	27,7	47,7	31	19	15	-
new	16 12 M22x1,5-D	12	9	M22x1,5	21	31,2	8,1	27,3	47,3	31	27	15	-

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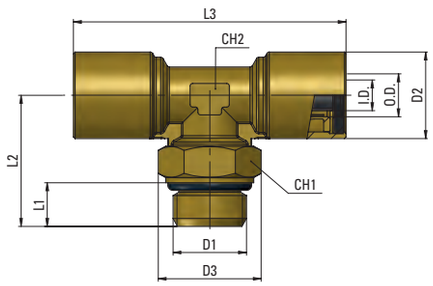
MT 21

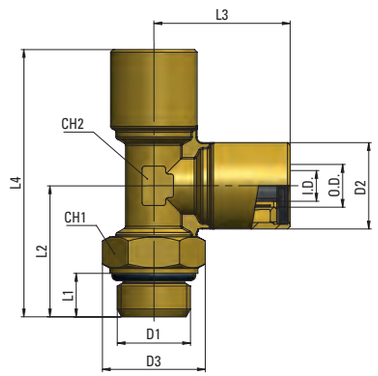
T centrale maschio cilindrico orientabile | Orientable tee fitting, parallel | Raccord T tournant, mâle cylindrique | T-Verschraubung, schwenkbar und zylindrisch



	Type	Tubo OD	Tubo ID	D_1	D_2	D_3	L_1	L_2	L_3	CH_1	CH_2	g
new	21 06 M10x1	6	4	M10x1	14,5	16,2	6,3	19,5	50	14	9	36,7
new	21 06 M12x1,5	6	4	M12x1,5	14,5	17,3	8,3	23,8	50	15	9	43,1
new	21 06 M14x1,5	6	4	M14x1,5	14,5	19,6	8,3	23,5	50	17	9	45,8
new	21 06 M16x1,5	6	4	M16x1,5	14,5	22	8,3	24	52	19	11	56,4
new	21 08 M10x1	8	6	M10x1	16,5	16,2	6,3	20,5	52	14	11	45,3
new	21 08 M12x1,5	8	6	M12x1,5	16,5	17,3	8,3	24,5	52	15	11	50,3
new	21 08 M14x1,5	8	6	M14x1,5	16,5	19,6	8,3	25	52	17	11	53,8
new	21 08 M16x1,5	8	6	M16x1,5	16,5	22	8,3	24,5	52	19	11	57,2
new	21 08 M22x1,5	8	6	M22x1,5	18,5	31,2	8,1	26,5	52	27	15	102,5
new	21 10 M12x1,5	10	8	M12x1,5	18,5	17,3	8,3	25,5	58,6	15	13	64,9
new	21 10 M14x1,5	10	8	M14x1,5	18,5	19,6	8,3	26	58,6	17	13	66,6
new	21 10 M16x1,5	10	8	M16x1,5	18,5	22	8,3	26	58,6	19	13	27,8
new	21 10 M22x1,5	10	8	M22x1,5	18,5	31,2	8,1	26,5	60,6	27	15	99,6
new	21 12 M12x1,5	12	9	M12x1,5	21	17,3	8,3	26,7	62	15	15	82,3
new	21 12 M14x1,5	12	9	M14x1,5	21	19,6	8,3	26,8	62	17	15	83,5
new	21 12 M16x1,5	12	9	M16x1,5	21	22	8,3	27,3	62	19	15	87
new	21 12 M22x1,5	12	9	M22x1,5	21	31,2	8,1	27,6	62	27	15	107,8
new	21 15 M16x1,5	15	12	M16x1,5	27	22	8,3	30,2	74	19	19	171,6
new	21 15 M22x1,5	15	12	M22x1,5	27	31,2	8,1	30,5	74	27	19	191,3
new	21 16 M16x1,5	16	12	M16x1,5	27	22	8,3	30,2	75	19	19	161,6
new	21 16 M22x1,5	16	12	M22x1,5	27	31,2	8,1	30,5	75	27	19	180,1
new	21 18 M22x1,5	18	14	M22x1,5	29	31,2	8,1	32,5	78	27	21	202,1

MT 24

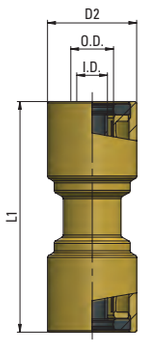
T laterale maschio cilindrico orientabile | Orientable run tee fitting, parallel | Raccord T latéral, tournant cylindrique | T-Schwenkverschraubung, zylindrisch



	Type	Tubo OD	Tubo ID	D_1	D_2	D_3	L_1	L_2	L_3	L_4	CH_1	CH_2	g
new	24 06 M10x1	6	4	M10x1	14,5	16,2	6,3	19,5	25	44,5	14	9	37,3
new	24 06 M12x1,5	6	4	M12x1,5	14,5	17,3	8,3	23,5	25	48,5	15	9	42,9
new	24 06 M14x1,5	6	4	M14x1,5	14,5	19,6	8,3	23,5	25	48,5	17	9	45,3
new	24 06 M16x1,5	6	4	M16x1,5	14,5	22	8,3	24	26	50	19	11	56,5
new	24 08 M10x1	8	6	M10x1	16,5	16,2	6,3	20,5	26	46,5	14	11	45,3
new	24 08 M12x1,5	8	6	M12x1,5	16,5	17,3	8,3	24,5	26	50,5	15	11	49,2
new	24 08 M14x1,5	8	6	M14x1,5	16,5	19,6	8,3	25	26	51	17	11	53,5
new	24 08 M16x1,5	8	6	M16x1,5	16,5	22	8,3	24,5	26	50,5	19	11	42,7
new	24 08 M22x1,5	8	6	M22x1,5	18,5	31,2	8,1	26,5	26	52,5	27	15	102,5
new	24 10 M12x1,5	10	8	M12x1,5	18,5	17,3	8,3	25,5	29,3	54,8	15	13	65,4
new	24 10 M14x1,5	10	8	M14x1,5	18,5	19,6	8,3	26	29,3	55,3	17	13	66,4
new	24 10 M16x1,5	10	8	M16x1,5	18,5	22	8,3	26	29,3	55,3	19	13	27,8
new	24 10 M22x1,5	10	8	M22x1,5	18,5	31,2	8,1	26,5	30,3	56,8	27	15	98,9
new	24 12 M12x1,5	12	9	M12x1,5	21	17,3	8,3	26,7	31	57,7	15	15	81,8
new	24 12 M14x1,5	12	9	M14x1,5	21	19,6	8,3	26,7	31	57,7	17	15	83,8
new	24 12 M16x1,5	12	9	M16x1,5	21	22	8,3	27,3	31	58,3	19	15	89,2
new	24 12 M22x1,5	12	9	M22x1,5	21	31,2	8,1	27,6	31	58,6	27	15	108,2
new	24 15 M16x1,5	15	12	M16x1,5	27	22	8,3	30,2	37	67,2	19	19	171,3
new	24 15 M22x1,5	15	12	M22x1,5	27	31,2	8,1	30,5	37	67,5	27	19	192,8
new	24 16 M16x1,5	16	12	M16x1,5	27	22	8,3	30,2	37,5	67,7	19	19	161,6
new	24 16 M22x1,5	16	12	M22x1,5	27	31,2	8,1	30,5	37,5	68	27	19	180,9
new	24 18 M22x1,5	18	14	M22x1,5	29	31,2	8,1	32,5	39	71,5	27	21	201,6

MT 26

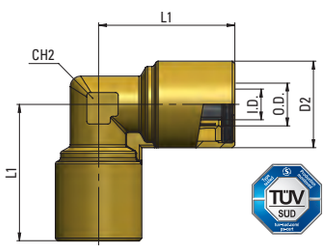
Giunzione intermedia | Union | Union simple égale | Gerade Verbindung



	Type	Tubo OD	Tubo ID	D2	L1	g
new	26 06 06	6	4	15	44,2	28
new	26 08 08	8	6	17	44	33,8
new	26 10 10	10	8	19	48,5	45,3
new	26 12 12	12	9	21	49,2	52,7
new	26 15 15	15	12	26	54,6	99,3
new	26 16 16	16	12	27	55	106,8
new	26 18 18	18	14	29	58	122,9

MT 28

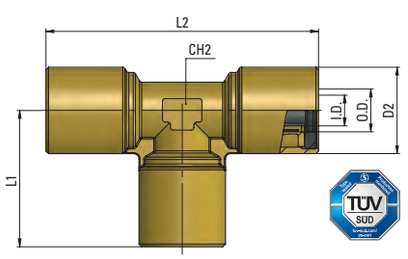
Gomito intermedio | Union elbow | Raccord à coude | Winkelverschraubung



	Type	Tubo OD	Tubo ID	D2	L1	CH2	g
new	28 06 06	6	4	14,5	25	9	28,7
new	28 08 08	8	6	16,5	26	11	35,7
new	28 10 10	10	8	18,5	29,3	13	48,4
new	28 12 12	12	9	21	31	15	66,2
new	28 15 15	15	12	27	37	19	145
new	28 16 16	16	12	27	37,5	19	133,9
new	28 18 18	18	14	29	39	21	153,5

MT 29

T intermedio | Union tee | T égal | T-Verschraubung



	Type	Tubo OD	Tubo ID	D2	L1	L2	CH2	g
new	29 06 06	6	4	14,5	25	50	9	41,7
new	29 08 08	8	6	16,5	26	52	11	50,4
new	29 10 10	10	8	18,5	29,3	58,6	13	69,5
new	29 12 12	12	9	21	31	62	15	89,9
new	29 15 15	15	12	27	37	74	19	-
new	29 16 16	16	12	27	37,5	75	19	-
new	29 18 18	18	14	29	39	78	21	-

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PT LINE

cmatic®
PNEUMATIC FITTINGS

DOT Push-in Fittings, Inch/NPT

I

Raccordi Automatici per il settore Automotive conformi alle specifiche SAE J2494-3 e SAE J1131.
La serie PT è progettata per l'utilizzo in tutti i circuiti pneumatici e nelle parti di assemblaggio negli assiemi eccetto quelle che interessano il telaio e l'asse e quelle tra motrice e rimorchio. Questa serie è inoltre conforme a tutti i requisiti della specifica DOT FMVSS §517.106.

GB

Push in fittings for Vehicles applications complying with SAE J2494-3 and SAE J1131 specs.
Cmatic PT Line is designed for use on all pneumatic circuits and assemblies except between the frame and axle, or between a towed and towing vehicle. PT also complies with DOT FMVSS §517.106 standard.

F

Raccords instantanés idéales pour les applications sur les véhicules et conforme aux spécifiques SAE J2494-3 et SAE J1131.
La gamme PT est conçue pour être utilisée sur tous les circuits et assemblages pneumatiques sauf entre le châssis et l'essieu, ou entre un véhicule remorqué et remorqueur. La gamme PT est conforme à la norme DOT FMVSS §517.106.

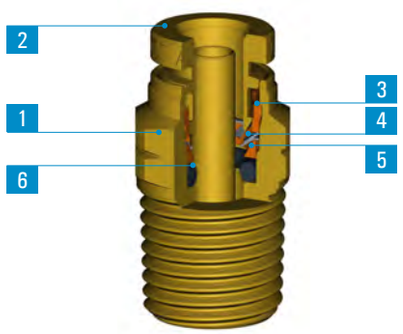
D

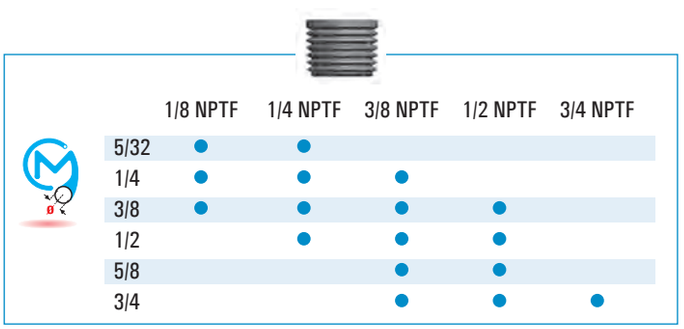
Steckverschraubung für Fahrzeuganwendungen, gemäß DOT FMVSS §571.106, SAE J2494-3 und SAE J1131.
Cmatic PT findet in allen pneumatischen Kreisläufen und Baugruppen Anwendung, außer zwischen Rahmen und Achse oder zwischen einem Zug- und Zugfahrzeug. Die PT Baureihe entspricht der Norm DOT FMVSS §517.106.

PT

1 - 2	3	4	5	6
Corpo ed Anello Estrattore Body and Release Ring Corps et poussoir Körper und Lösering	Anello di Ritegno Holding Ring Bague de retenue Haltering	Pinza aggraffaggio Gripping ring Pince Spannzange	Anello portapinza Protection Ring Bague protection Schutzring	Guarnizioni Seals Joint d'étancheité Dichtung
Ottone UNI EN 12164 CW614N - UNI EN 12165 CW617N Nichelato Brass UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickel Plated Laiton UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickelé Messing UNI EN 12164 CW614N - UNI EN 12165 CW617N vernickelt	Resina (PEI) Resin (PEI) Résine (PEI) Harz (PEI)	Acciaio INOX AISI 301 Stainless steel AISI 301 Acier Inox AISI 301 Edelstahl AISI 301	Resina (PEI) Resin (PEI) Résine (PEI) Harz (PEI)	NBR (Bassa temperatura) NBR (Low temperature) NBR (Basse température) NBR (Niedrige Temperatur)

-50°C ÷ 100°C | Max 20 bar | -99 KPa





SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
Tubi PA conformi alle specifiche SAE (DOT).

Campi di applicazione:
Campi di Applicazione: Circuiti Pneumatici applicati ai mezzi di Trasporto e Rimorchi: Sospensioni, Impianti Frenanti, Trasmissioni, Chiusura porte e finestrini, Regolazione dei sedili, Strumentazione, Sistemi di Condizionamento, Clacson, Motori dei tergicristalli, Valvole, Cilindri e Accessori.
La serie PT è la soluzione ottimale per tutte le applicazioni che utilizzano aria ad eccezione di quelle ideate per l'utilizzo tra telaio e asse o tra un rimorchio e motrice.

DATA SHEET

Recommended tubings:
PA Tubings complying with SAE (DOT).

Application fields:
Application Fields: Pneumatic circuits for truck and Trailers: Air Suspension, Braking Systems, Transmissions, locking doors and windows, Seat adjustment, Instrumentation, Air conditioning systems, horn, wiper motors, valves, cylinders and accessories.
PT line is suitable for all air assisted applications except those designed for use between frame and axle or between towed and towing vehicles.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
PA tubes selon la norme SAE (DOT).

Domaines d'application:
Domain d'emploi: Circuits pneumatiques appliqués aux moyens de Transport et Remorques: Suspensions, systèmes de freinage, de transmissions, de verrouillage des portes et fenêtres, réglage des sièges, instrumentation, systèmes de climatisation, klaxon, moteurs essuie-glace, vannes, vérins et accessoires.
La gamme PT convient à toutes les applications à assistance pneumatique, à l'exception de celles conçues pour une utilisation entre le châssis et l'essieu ou entre les véhicules remorqués et remorqueurs.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA Schläuche gemäß SAE (DOT).

Anwendungsbereiche:
Anwendungsbereiche: Pneumatische Anlagen von Fahrzeugen und Anhänger: Federung, Bremssysteme, Getriebe, Verriegelung von Türen und Fenstern, Sitzverstellung, Instrumentierung, Systemanlage, Hupe, Wischermotoren, Ventile, Zylinder und Zubehör.
Die PT-Leitung ist für alle luftunterstützten Anwendungen geeignet, mit Ausnahme derjenigen, die für den Einsatz zwischen Rahmen und Achse oder zwischen Zug- und Zugfahrzeugen ausgelegt sind.

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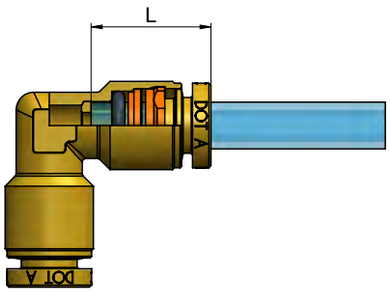
Profondità di inserimento del tubo | Tubing insertion depth | Profondeur d'insertion du tube | Schlaucheinstecktiefe



Øe Tube	L
5/32	13,9
1/4	16,3
3/8	18,3
1/2	19,7
5/8	23,3
3/4	25,1

ISTRUZIONI DI MONTAGGIO

1. Tagliare il tubo a 90° (servendosi della pinza tagliatubo TCUT) verificando l'assenza di bave interne ed esterne e facendo attenzione che il tubo non si presenti ovalizzato dopo il taglio.
2. Inserire il tubo nel raccordo spingendolo fino in battuta.

Estrazione del tubo
Esercitare una leggera pressione sull'anello estrattore, estraendo contemporaneamente il tubo dal corpo del raccordo.

ASSEMBLY INSTRUCTIONS

1. Cut the tube square (by means of a hose cutter i.e. our TCUT) making sure that no burrs are left and that the tube is not oval.
2. Insert the tube into the fitting until it bottoms.

Tube release
While pressing on the release ring, pull out the tube from the fitting.

INSTRUCTIONS DE MONTAGE

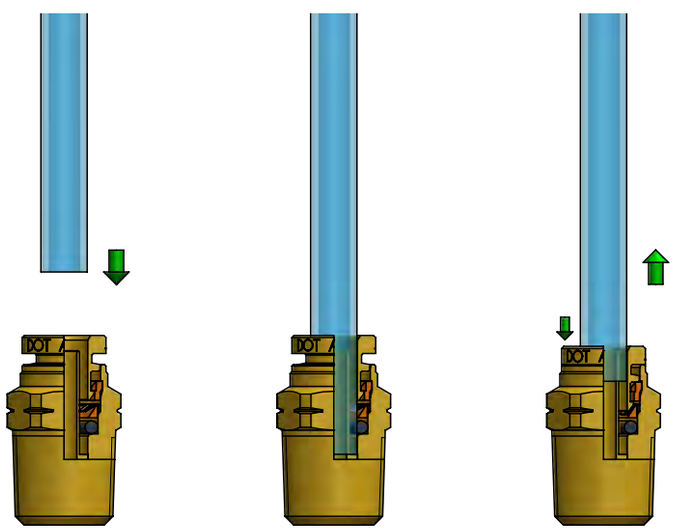
1. Sectionner le tube à 90° par notre coupe tube TCUT en prenant soin de ne par créer des bavures et de ne pas ovaliser le tube.
2. Pousser le tube jusqu' au fond du raccord.

Débranchement du tube
Appuyer sur le poussoir en métal et tirer simultanément sur le tube.

MONTAGEANWEISUNGEN

1. Schlauch mittels unserer Schlauchschere (TCUT) 90° abschneiden und entgraten.
2. Darauf achten, daß der Schlauch danachnicht oval gequetscht ist und dann ihn bis zum Verschraubungsanschlag einstecken.

Schlauchlösen
Auf den Druckring drücken und gleichzeitig den Schlauch rausziehen.



Effettuato il collegamento, assicurarsi che il tubo inserito nel raccordo non sia sottoposto ad alcuna forza di trazione; è necessario inoltre rispettare durante il collegamento del tubo il raggio minimo di curvatura consigliato così come riportato nella sezione tubi di questo catalogo tecnico (vedi pag. 363)
Al fine di evitare lo sgancio involontario del tubo nessun oggetto deve venire a contatto con l'anello estrattore del raccordo evitando così l'esercizio di qualsiasi forza indesiderata, anche solo laterale, che potrebbe causare la pressione dell'anello estrattore e conseguente rilascio del tubo.
Per il serraggio delle parti filettate del raccordo si raccomanda di attenersi alle coppie consigliate riportate a pag. 6

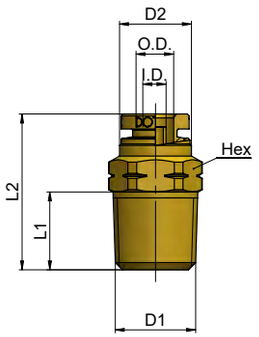
Once the tubing is connected to the fitting, make sure that the tubing is not subject to any tensile strength and that the min. recommended bending radius stated in the tubing section of this catalogue is complied with (see page 363).
To prevent any accidental tube release, no components have to come in touch with the release ring and exercise any unwanted pressure on the same. Indeed however lateral, any load on the release ring may cause the tube disconnection.
To tighten threads, please check out our tightening torque chart illustrated at page 6.

Une fois effectué le branchement, s'assurer que le tube inséré dans le raccord n'est soumis à aucune force de traction. Egalement, il est nécessaire de respecter, lors du branchement du tube, le rayon minimum de courbure conseillé dans la section tubes de ce catalogue technique (voir la page 363).
Afin d'éviter le décrochage involontaire du tube, aucun objet ne doit entrer en contact avec la bague d'extraction du raccord, empêchant ainsi l'exercice de toute force indésirable, ne serait-ce que latérale, qui pourrait provoquer la pression de la bague d'extraction et donc le relâchement du tube.
Pour le serrage des parties filetées du raccord, il est recommandé de s'en tenir aux couples de serrage conseillés et reportés à la page 6.

Nach der Schlauchverbindung, sicherstellen, dass der in die Verschraubung eingeführte Schlauch keinen Zugbelastungen ausgesetzt ist; beim Anschluss des Schlauchs muss der empfohlene Mindestbiegeradius eingehalten werden, gemäß den in diesem technischen Katalog im Schlauchabschnitt, angegebenen Hinweisen (siehe Seite 363).
Um das versehentliche Lösen des Schlauchs zu verhindern, darf kein Gegenstand den Lösering der Verschraubung berühren. Keine unerwünschte Kraft darf auch nicht seitlich einwirken und kein Druck soll auf den Lösering ausgeübt werden, denn dies das Schlauchlösen verursachen könnte.
Zum Festziehen der Gewinde sich an den, auf Seite 6, empfohlenen Drehmomente einhalten.

PT 11

Diritto maschio conico | Taper straight, male | Union simple mâle conique | Gerade Einschraubverschraubung, kegelig

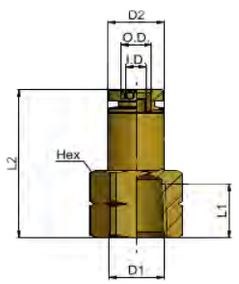


PTFE

	Type	Tube OD	Tube ID	D1 NPTF	D2	L1	L2	HEX	g
new	11 5/32 1/8	5/32	2,2	1/8	9,5	8,5	21	7/16	-
new	11 5/32 1/4	5/32	2,2	1/4	9,5	13	25,5	9/16	-
	11 1/4 1/8	1/4	4,2	1/8	12	8,5	23,5	1/2	11,8
	11 1/4 1/4	1/4	4,2	1/4	12	13	26	9/16	19,8
	11 1/4 3/8	1/4	4,2	3/8	12	13	27	11/16	33,4
	11 3/8 1/8	3/8	6,2	1/8	16	8,5	29,5	11/16	24
	11 3/8 1/4	3/8	6,2	1/4	16	13	33	11/16	30,5
	11 3/8 3/8	3/8	6,2	3/8	16	13	26,5	11/16	28,4
	11 3/8 1/2	3/8	6,2	1/2	16	17	31,5	7/8	60,3
	11 1/2 1/4	1/2	9,2	1/4	20	13	35,7	13/16	40,4
	11 1/2 3/8	1/2	9,2	3/8	20	13	30,7	13/16	34,8
	11 1/2 1/2	1/2	9,2	1/2	20	17	31,7	7/8	50,9
new	11 5/8 3/8	5/8	11	3/8	23,5	13	39,5	1	-
new	11 5/8 1/2	5/8	11	1/2	23,5	17	38	1	-
new	11 3/4 3/8	3/4	14,2	3/8	26,5	13	43,5	1 1/16	-
new	11 3/4 1/2	3/4	14,2	1/2	26,5	17	45,5	1 1/16	-
new	11 3/4 3/4	3/4	14,2	3/4	26,5	17	39	1 1/16	-

PT 13

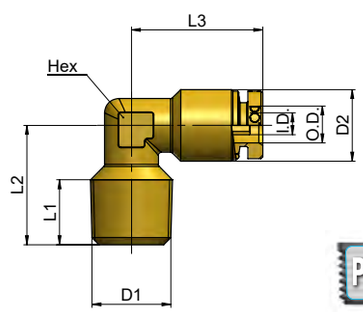
Diritto femmina | Female straight | Union simple femelle | Gerade Aufschraubverschraubung



	Type	Tube OD	Tube ID	D1 NPTF	D2	L1	L2	HEX	g
new	13 5/32 1/8	5/32"	2,2	1/8	9,5	8,5	26,5	1/2"	-
	13 1/4 1/8	1/4"	4,2	1/8	12	8,5	28,5	1/2"	14
	13 1/4 1/4	1/4"	4,2	1/4	12	12	33	11/16"	26,5
	13 3/8 1/4	3/8"	4,2	1/4	16	12	35	11/16"	32,5
	13 3/8 3/8	3/8"	6,2	3/8	16	12,5	35	13/16"	37,5
new	13 3/8 1/2	3/8"	6,2	1/2	16	13,5	38,5	1"	-
new	13 1/2 1/4	1/2"	9,2	1/4	20	12	35,2	13/16"	-
new	13 1/2 3/8	1/2"	9,2	3/8	20	12,5	36,7	13/16"	-
new	13 1/2 1/2	1/2"	9,2	1/2	20	13,5	39,2	1"	-

PT 14

Gomito maschio conico | Taper elbow fitting, male | Raccord à coude mâle conique | Winkelverschraubung, kegelig



PTFE

	Type	Tube OD	Tube ID	D1 NPTF	D2	L1	L2	L3	HEX	g
new	14 5/32 1/8	5/32"	2,2	1/8	9,5	8,4	16	19	10	-
	14 1/4 1/8	1/4"	4,2	1/8	12	8,4	16	22	10	14,7
	14 1/4 1/4	1/4"	4,2	1/4	12	11	20	22	10	-
	14 3/8 1/4	3/8"	6,2	1/4	16	12	22,5	26	14	32,5
	14 3/8 3/8	3/8"	6,2	3/8	16	11	22,5	26	14	35,7

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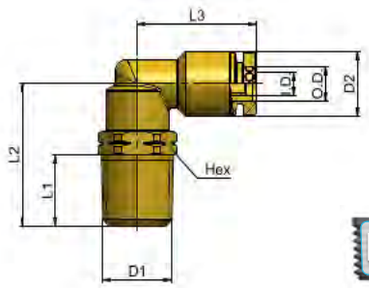
PT 15

Gomito maschio conico girevole | Taper swivelling elbow fitting, male | Raccord à coude tournant, mâle conique | Schwenkbare Winkelverschraubung, kegelig

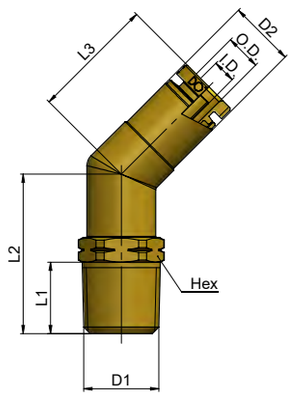


PTFE

	Type	Tube OD	Tube ID	D1 NPTF	D2	L1	L2	L3	HEX	g
new	15 5/32 1/8	5/32	2,2	1/8	9	8,5	18,5	19	7/16	-
new	15 5/32 1/4	5/32	2,2	1/4	9	13	26,2	21	9/16	-
	15 1/4 1/8	1/4	4,2	1/8	12	8,5	21,2	23,5	1/2	21
	15 1/4 1/4	1/4	4,2	1/4	12	13	26,2	23,5	9/16	25,6
	15 1/4 3/8	1/4	4,2	3/8	12	13	26,7	23,5	11/16	32,4
	15 3/8 1/8	3/8	6,2	1/8	16	8,5	24	27	11/16	41,4
	15 3/8 1/4	3/8	6,2	1/4	16	13	28,5	27	11/16	44,3
	15 3/8 3/8	3/8	6,2	3/8	16	13	28,5	27	11/16	45,7
	15 3/8 1/2	3/8	6,2	1/2	16	17	34	27	7/8	64
	15 1/2 1/4	1/2	9,2	1/4	20	13	32	29,7	13/16	73,5
	15 1/2 3/8	1/2	9,2	3/8	20	13	32	29,7	13/16	68,3
	15 1/2 1/2	1/2	9,2	1/2	20	17	36,5	29,7	7/8	81,6
new	15 5/8 3/8	5/8	11	3/8	24	13	35,5	36	7/8	-
new	15 5/8 1/2	5/8	11	1/2	24	17	39,5	36	7/8	-
new	15 5/8 3/4	5/8	11	3/4	24	17	39,5	36	1 1/16	-
new	15 3/4 3/8	3/4	14,2	3/8	27	13	35,5	38	7/8	-
new	15 3/4 1/2	3/4	14,2	1/2	27	17	39,5	38	7/8	-
new	15 3/4 3/4	3/4	14,2	3/4	27	17	39,5	38	1 1/16	-

PT 15-45

Gomito girevole conico, maschio 45° | Swivelling elbow fitting, male 45° | Raccord à coude tournant, mâle 45° | Schwenkbare Winkelverschraubung, kegelig, männlich 45°

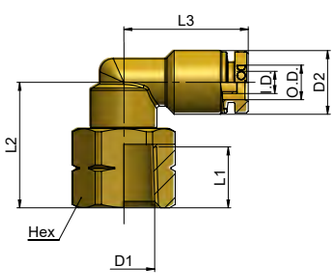


PTFE

	Type	Tube OD	Tube ID	D1 NPTF	D2	L1	L2	L3	HEX	g
new	15 1/4 1/8 45°	1/4"	4,2	1/8	12	8,5	23	22,5	1/2"	-
new	15 1/4 1/4 45°	1/4"	4,2	1/4	12	13	28	22,5	9/16"	-
new	15 3/8 1/4 45°	3/8"	6,2	1/4	16	13	29	26	11/16"	-
new	15 3/8 3/8 45°	3/8"	6,2	3/8	16	13	29,5	26	11/16"	-
new	15 3/8 1/2 45°	3/8"	6,2	1/2	16	17	35	26	7/8"	-
new	15 1/2 3/8 45°	1/2"	9,2	3/8	20	13	32	28,7	13/16"	-
new	15 1/2 1/2 45°	1/2"	9,2	1/2	20	17	36,5	28,7	7/8"	-

PT 17

Gomito girevole, femmina | Swivelling elbow fitting, female | Raccord à coude tournant, femâle | Schwenkbare Winkelverschraubung Kegelig, weiblich



	Type	Tube OD	Tube ID	D1 NPTF	D2	L1	L2	L3	HEX	g
new	17 5/32 1/8	5/32"	2,2	1/8	9	7,5	19,7	19	9/16"	-
new	17 5/32 1/4	5/32"	2,2	1/4	9	11,5	23,7	21	11/16"	-
new	17 1/4 1/8	1/4"	4,2	1/8	12	7,5	19,7	23,5	9/16"	-
new	17 1/4 1/4	1/4"	4,2	1/4	12	11,5	23,7	23,5	11/16"	-
new	17 3/8 1/4	3/8"	6,2	1/4	16	11,5	25,5	27	11/16"	-
new	17 3/8 3/8	3/8"	6,2	3/8	16	11,5	25,5	27	13/16"	-
new	17 1/2 3/8	1/2"	9,2	3/8	20	11,5	28	29,7	13/16"	-
new	17 1/2 1/2	1/2"	9,2	1/2	20	13,5	31	29,7	1"	-

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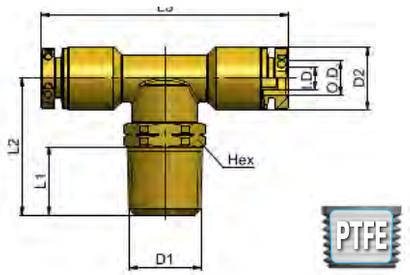
PT 20

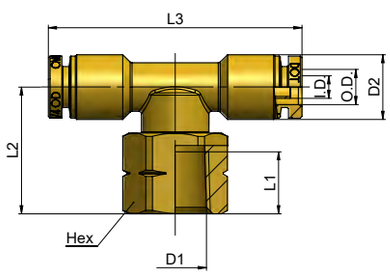
T centrale maschio conico girevole | Swivelling tee fitting, taper | Raccord à té tournant, mâle conique | T-Verschraubung, schwenkbar und kegelig



	Type	Tube OD	Tube ID	D1 NPTF	D2	L1	L2	L3	HEX	g
new	20 5/32 1/8	5/32"	2,2	1/8	9	8,5	21,2	42	1/2"	-
new	20 5/32 1/4	5/32"	2,2	1/4	9	13	26,2	42	9/16"	-
	20 1/4 1/8	1/4"	4,2	1/8	12	8,5	21,2	47	1/2"	34,5
	20 1/4 1/4	1/4"	4,2	1/4	12	13	26,2	47	9/16"	33,6
new	20 1/4 3/8	1/4"	4,2	3/8	12	13	26,7	47	11/16"	-
new	20 3/8 1/8	3/8"	6,2	1/8	16	8,5	24	54	11/16"	-
	20 3/8 1/4	3/8"	6,2	1/4	16	13	28,5	54	11/16"	59,8
	20 3/8 3/8	3/8"	6,2	3/8	16	13	28,5	54	11/16"	61,2
new	20 3/8 1/2	3/8"	6,2	1/2	16	17	34	54	7/8"	61,2
new	20 1/2 1/4	1/2"	9,2	1/4	20	13	32	59,4	13/16"	-
	20 1/2 3/8	1/2"	9,2	3/8	20	13	32	59,4	13/16"	90,3
	20 1/2 1/2	1/2"	9,2	1/2	20	17	36,5	59,4	7/8"	103

PT 20-F

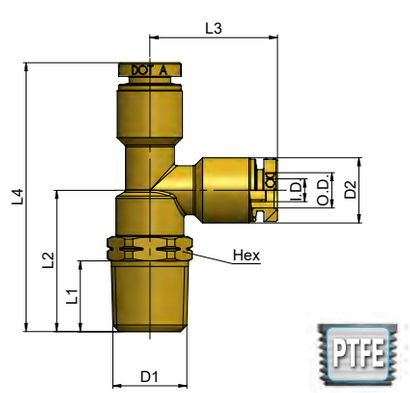
T centrale girevole, femmina | Swivelling tee fitting, female | Raccord à coude tournant, femâle | T-Verschraubung Schwenkbar, weiblich



	Type	Tube OD	Tube ID	D1 NPTF	D2	L1	L2	L3	HEX	g
new	20 1/4 1/4 -F	1/4"	4,2	1/4	12	11,5	23,7	47	11/16"	-
new	20 3/8 1/4 -F	3/8"	6,2	1/4	16	11,5	25,5	54	11/16"	-
new	20 3/8 3/8 -F	3/8"	6,2	3/8	16	11,5	25,5	54	13/16"	-
new	20 1/2 3/8 -F	1/2"	9,2	3/8	20	11,5	28	59,4	13/16"	-
new	20 1/2 1/2 -F	1/2"	9,2	1/2	20	13,5	31	59,4	1"	-

PT 23

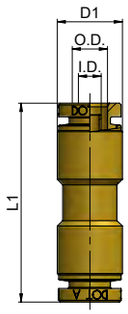
T laterale maschio conico girevole | Lateral run tee fitting, taper | Raccord à té latéral conique, tournant | T-Schwenkverschraubung, kegelig



	Type	Tube OD	Tube ID	D1 NPTF	D2	L1	L2	L3	L4	HEX	g
new	23 5/32 1/8	5/32"	2,2	1/8	9	8,5	21,2	21	42	1/2"	-
new	23 5/32 1/4	5/32"	2,2	1/4	9	13	26,2	21	47	9/16"	-
	23 1/4 1/8	1/4"	4,2	1/8	12	8,5	21,2	23,5	44,5	1/2"	29,1
	23 1/4 1/4	1/4"	4,2	1/4	12	13	26,2	23,5	49,5	9/16"	33,8
new	23 1/4 3/8	1/4"	4,2	3/8	12	13	26,7	23,5	50	11/16"	-
	23 3/8 1/4	3/8"	6,2	1/4	16	13	28,5	27	55,5	11/16"	54,5
	23 3/8 3/8	3/8"	6,2	3/8	16	13	28,5	27	55,5	11/16"	61
new	23 3/8 1/2	3/8"	6,2	1/2	16	17	34	27	61	7/8"	-
new	23 1/2 1/4	1/2"	9,2	1/4	20	13	32	29,7	61,7	13/16"	-
	23 1/2 3/8	1/2"	9,2	3/8	20	13	32	29,7	61,7	13/16"	91,1
	23 1/2 1/2	1/2"	9,2	1/2	20	17	36,5	29,7	66,2	7/8"	103,5

PT 26

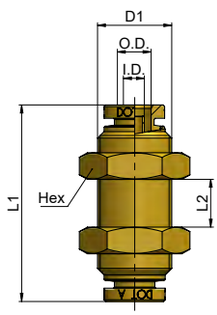
Giunzione intermedia | Union | Union simple égale | Gerade Verbindung



	Type	Tube OD	Tube ID	D_1	L_1	g
new	26 5/32 5/32	5/32"	2,2	9	31	-
	26 1/4 1/4	1/4"	4,2	12	33,6	28,9
	26 3/8 3/8	3/8"	6,2	16	38,6	31,5
	26 1/2 1/2	1/2"	9,2	20	43,4	91,1
new	26 5/8 5/8	5/8"	11	24	52	-
new	26 3/4 3/4	3/4"	14,2	28	57	-

PT 27

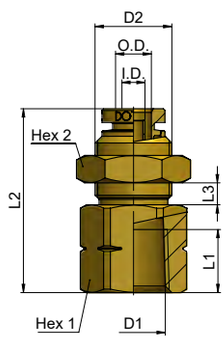
Giunzione intermedia passaparete | Bulkhead union | Union traversée de cloison | Gerade Schottverschraubung



	Type	Tube OD	Tube ID	D_1	L_1	L_2	HEX	g
new	27 5/32 5/32	5/32"	2,2	M12x1	31	14,5	18	-
	27 1/4 1/4	1/4"	4,2	M14x1	37	14,5	18	17,7
	27 3/8 3/8	3/8"	6,2	M18x1	41	17,5	22	60,1
	27 1/2 1/2	1/2"	9,2	M22x1,5	43,4	18,5	26	84,2
new	27 5/8 5/8	5/8"	11	M26x1,5	52	22	32	-

PT 27-F

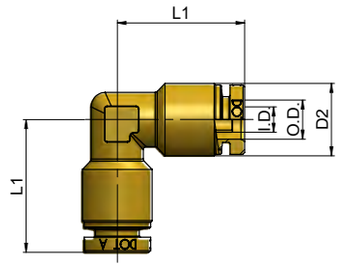
Giunzione intermedia passaparete femmina | Bulkhead union female | Union traversée de cloison femelle | Gerade Schottverschraubung weiblich



	Type	Tube OD	Tube ID	D_1 NPTF	D_2	L_1	L_2	L_3	HEX_1	HEX_2	g
new	27 5/32 1/4 -F	5/32"	2,2	1/4"	M12x1	11,5	31	7	11/16"	16	-
new	27 1/4 1/8 -F	1/4"	4,2	1/8"	M14x1	7,5	28,5	8	11/16"	18	-
new	27 1/4 1/4 -F	1/4"	4,2	1/4"	M14x1	11,5	33,5	8	11/16"	18	-
new	27 3/8 1/4 -F	3/8"	6,2	1/4"	M18x1	11,5	35	10	7/8"	22	-
new	27 3/8 3/8 -F	3/8"	6,2	3/8"	M18x1	11,5	36	10	7/8"	22	-
new	27 3/8 1/2 -F	3/8"	6,2	1/2"	M18x1	13,5	39	10	1"	22	-
new	27 1/2 3/8 -F	1/2"	9,2	3/8"	M22x1,5	11,5	37,2	12	1"	24	-
new	27 1/2 1/2 -F	1/2"	9,2	1/2"	M22x1,5	13,5	40,2	12	1"	24	-

PT 28

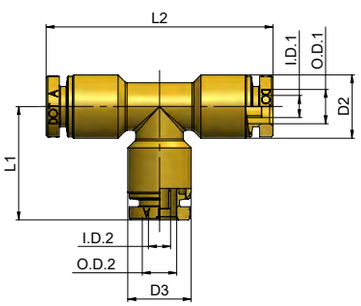
Gomito intermedio | Union elbow | Raccord à coude | Winkelverschraubung



	Type	Tube OD	Tube ID	D_2	L_1	g
new	28 5/32 5/32	5/32"	2,2	9	19	-
	28 1/4 1/4	1/4"	4,2	12	22	18,1
	28 3/8 3/8	3/8"	6,2	16	26	38,2
	28 1/2 1/2	1/2"	9,2	20	28,2	61,3
new	28 5/8 5/8	5/8"	11	24	35,5	-

PT 29

T intermedio | Union tee | T égal | T-Verschraubung



	Type	Tube OD_1	Tube ID_1	Tube OD_2	Tube ID_2	D_2	D_3	L_1	L_2	g
new	29 5/32 5/32	5/32	2,2	5/32	2,2	9	9	19	38	-
	29 1/4 1/4	1/4	4,2	1/4	4,2	12	12	21,5	43	25
	29 3/8 3/8	3/8	6,2	3/8	6,2	16	16	25,5	51	52,5
new	29 3/8 1/4	3/8	6,2	1/4	4,2	24	12	24	51	-
	29 1/2 1/2	1/2	9,2	1/2	9,2	20	20	27	56,4	83,6
new	29 1/2 1/4	1/2	9,2	1/4	4,2	20	12	26	56,4	-
new	29 1/2 3/8	1/2	9,2	3/8	6,2	24	16	28	56,4	-
new	29 5/8 5/8	5/8	11	5/8	11	24	24	35,5	71	-

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PT 10

Cartuccia a pressare

PT10 è la cartuccia a pressare di Cmatic sviluppata per essere utilizzata in applicazioni dove è richiesta compattezza e per essere installata nelle cavità in alluminio T6061 secondo lo standard SAE J2494-4. Le cavità realizzate con materiali diversi da T6061 T6 DEVONO essere regolate dimensionalmente in modo tale che, quando installato, il tubo / cartuccia / cavità superi i test definiti dalla SAE J1131 e SAE J2494-3.

Press-in cartridge

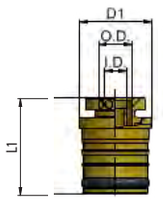
PT10 is Cmatic push in cartridge solution developed for applications where compactness is required and designed to be installed into Aluminum T6061 cavities according to SAE J2494-4 Standard. Cavities made from materials other than T6061 T6 SHALL be adjusted dimensionally so that when installed the tube/cartridge/cavity assembly will pass the applicable tests in SAE J1131 and SAE J2494-3.

Cartouche à presser

PT10 est une solution de cartouche Cmatic à presser développée pour des applications où la compacité est requise et conçue pour être installée dans des cavités en aluminium T6061 selon la norme SAE J2494-4. Les cavités fabriquées à partir de matériaux autres que T6061 T6 DOIVENT être ajustées de manière à ce que, une fois installé, l'ensemble tube / cartouche / cavité passe les tests applicables selon SAE J1131 et SAE J2494-3.

Einsteckpatrone

PT10 ist eine Cmatic Push-In-Kartuschenlösung, die für Anwendungen entwickelt wurde, bei denen Kompaktheit erforderlich ist, und für den Einbau in Aluminium-T6061-Hohlräume gemäß SAE J2494-4-Standard ausgelegt ist. Hohlräume aus anderen Materialien als T6061 T6 MÜSSEN so dimensioniert werden, dass die Rohr- / Kartuschen- / Hohlraumbaugruppe bei der Installation die in SAE J1131 und SAE J2494-3 geltenden Prüfungen besteht.



Type	Tube O.D.	Tube I.D.	D1	L1	g
10 5/32 00	**5/32"**	2,2	10	17,2	5
10 1/4 00	**1/4"**	4,2	14	18,5	11,1
10 3/8 00	**3/8"**	6,2	17,8	22,3	21,9

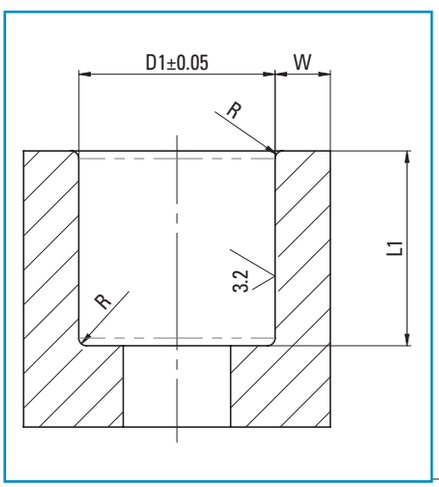
Schema di foratura della cartuccia secondo SAE J2494-4

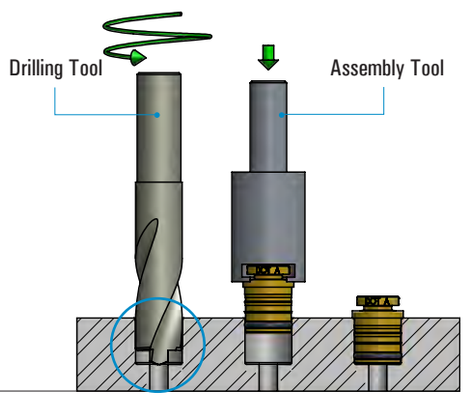
Cartridge cavity size according to SAE J2494-4

Plan de forage des cartouches selon SAE J2494-4

Patronenhohlraumgröße gemäß SAE J2494-4

Tube OD	D_1	L_1	W	R
5/32"	8,8	11,4	2	0,5
1/4"	12,8	12,7	2	0,5
3/8"	16,5	16,5	2	0,5





1 2

1 Realizzare la sede della cartuccia tramite foratura seguendo le indicazioni fornite.

2 Prima di inserire la cartuccia nella cavità, applicare del lubrificante sull'O-ring esterno della cartuccia.

3 Pressare manualmente la cartuccia all'interno della sede realizzata fino ad andare in appoggio sul piano della sede con l'Assembly Tool; così facendo si avrà la certezza di aver effettuato l'inserimento.

"Drilling e Assembly Tool" fornibili su richiesta.

1 Drill the cartridge seat, following the instructions given.

2 Before insert the cartridge into the cavity please apply some lubricant on the external cartridge O-ring.

3 Manually press the cartridge into the seat and by means of the Assembly tool push it all the way down until it bottoms; this will guarantee the proper cartridge assembly.

"Drilling and Assembly Tool "available upon request.

1 Réaliser le siège de la cartouche selon instructions données.

2 Avant d'insérer la cartouche dans la cavité, appliquez un peu de lubrifiant sur le joint torique externe de la cartouche.

3 Presser la cartouche à la main dans son siège et par l'outil de Montage presser la cartouche jusqu'au fond; comme ça on aura la garantie du montage correct.

"Outil à percer et pour le Montage" disponible sur demande.

1 Der Patronensitz gemäß Anweisungen bohren.

2 Bevor Sie die Patrone in den Hohlraum einsetzen, tragen Sie bitte etwas Schmiermittel auf den O-Ring der externen Patrone auf.

3 Die Patrone manuell in ihr Gehäuse einpressen und mit dem Einpresswerkzeug die Patrone bis zum Anschlag einpressen; damit wird die korrekte Patronenmontage garantiert.

"Bohren und Einpresswerkzeug" auf Anfrage verfügbar.

QO LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi Automatici per Oleodinamica, 350 bar
Push-in Fittings for Hydraulics, 350 bar
Raccords instantanés pour l'hydraulique, 350 bar
Steckverschraubungen für die Hydraulik, 350 bar

I

Raccordi Automatici sviluppati e testati per resistere ad una pressione di lavoro di 350 bar. Il design compatto ed innovativo permette montaggi veloci, semplici e sicuri senza l'ausilio di utensili, su superfici ridotte o durante operazioni d'assemblaggio difficoltose.
La tenuta idraulica tra il raccordo e l'innesto avviene tramite una guarnizione esterna al raccordo permettendone la manutenzione in caso di danneggiamento o usura.

GB

Push-in fittings designed and tested to guarantee a working pressure of 350 bar. The compact, innovative design allows for safe, quick and easy assemblies with no need for assembly tools on reduced manifold spaces as well as during difficult assembly operations. The hydraulic tightness between the fitting and the plug is guaranteed by an oring outside of the fitting itself. This feature enables the fitting serviceability in case of oring damage or wear out.

F

Raccords instantanés conçus et testés pour garantir une pression de travail de 350 bars. La conception compacte et innovante permet des assemblages sûrs, rapides et faciles sans outils de montage sur des espaces réduits et pendant toutes opérations de montage difficile. L'étanchéité hydraulique entre le raccord et l'embout est garantie par un joint torique situé à l'extérieur du raccord. Cette caractéristique permet de faciliter l'entretien des raccords en cas de dommage ou d'usure du joint torique.

D

Steckverschraubungen, entwickelt und getestet, um einen Betriebsdruck von 350 bar zu gewährleisten. Das kompakte, innovative Design ermöglicht eine sichere, schnelle und einfache Montage ohne Werkzeuge bei Verteilern und bei schwierigen Montagevorgängen. Die hydraulische Dichtheit zwischen der Verschraubung und dem Stecker wird durch eine Dichtung außerhalb der Verschraubung selbst gewährleistet. Dieses Merkmal ermöglicht die Wartung der Verschraubung bei Beschädigungen oder beim Verschleiß der Dichtung.

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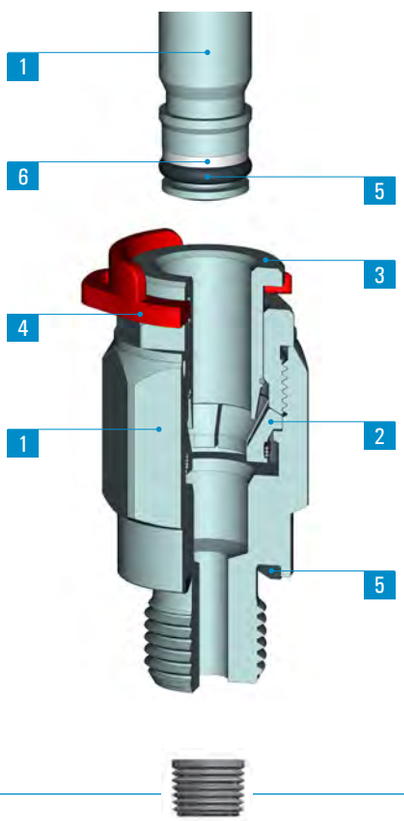
QO				
1 - 2	3	4	5	6
Corpo e Pinza di Aggraffaggio Body and Gripping ring Corps et Pince Körper und Spannzange	Estrattore Release Ring Poussoir Lösering	Anello di Sicurezza Safety Ring Bague sécurité Sicherheitsring	Guarnizioni Seals Joint d'ètancheité Dichtung	Anello di Backup Backup Ring Bague protection Schutzring
Acciaio Zincato 11SMnPb37 Zinc plated steel 11SMnPb37 Acier zingué 11SMnPb37 Stahl verzinkt 11SMnPb37	Acciaio Zincato 11SMnPb37 Zinc plated steel 11SMnPb37 Acier zingué 11SMnPb37 Stahl verzinkt 11SMnPb37	PA66	NBR 90 Sh	PTFE

-30°C ÷ 100°C

Max 350 bar



		G1/4	G3/8	G1/2	G3/4	7/16-20	9/16-18	3/4-16	11/16-12	M14x1,5	M16x1,5	M18x1,5	M20x1,5
D	4	●				●				●			
A	6		●				●				●		
S	8			●				●				●	
H*	12				●				●				●

*Dash = 1/16"

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
Tubo in gomma sintetica resistente all'olio con trecce di rinforzo; la ghiera per fissaggio al terminale sarà in funzione del tipo di tubo.

Campi di applicazione:
Impianti Oleodinamici.

DATA SHEET

Recommended tubings:
Synthetic oil-resistant rubber hose with braids reinforcement; the ferrule for the hose terminal will depend on the hose type.

Application fields:
Hydraulics.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
Tuyau en caoutchouc synthétique résistant à l'huile avec tresses de renforcement; la bague de fixation au raccordement dépendra du type de tuyau.

Domaines d'application:
Hydraulique.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Synthetischer ölbeständiger Gummischlauch mit Verstärkungsgeflechten; Die Hülse zur Klemmung an der Schlauchverbindung hängt vom Rohrtyp ab.

Anwendungsbereiche:
Hydraulik.

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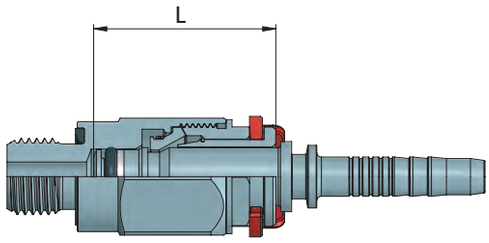
Profondità di inserimento del tubo | Tubing insertion depth | Profondeur d'insertion du tube | Schlaucheinstecktiefe



Plug-in DN Dash	L
4	31
6	33,5
8	37,5
12	42

ISTRUZIONI DI MONTAGGIO

1. Verificare che sul terminale siano montati correttamente sia il back-up ring che la guarnizione di tenuta e che siano opportunamente ingrassati;.
2. Inserire il terminale all'interno del raccordo spingendolo fino in battuta; l'inserimento del terminale può avvenire anche con l'anello di sicurezza montato sul raccordo.

Estrazione del tubo
1. Rimuovere l'anello di sicurezza inserito tra il corpo del raccordo e l'anello estrattore;
2. Esercitare una leggera pressione sull'anello estrattore estraendo contemporaneamente il terminale dal corpo del raccordo.

ASSEMBLY INSTRUCTIONS

1. Make sure that the back up ring and the tightness ring are assembled and duly greased on the straight hose connection.
2. Push the straight hose connection all the way into the fitting until it bottoms; the hose connection can be assembled also if the safety ring is in place under the release ring.

Tube release
1. Remove the safety ring under the release ring
2. Press the release ring and pull the hose connection out of the fitting.

INSTRUCTIONS DE MONTAGE

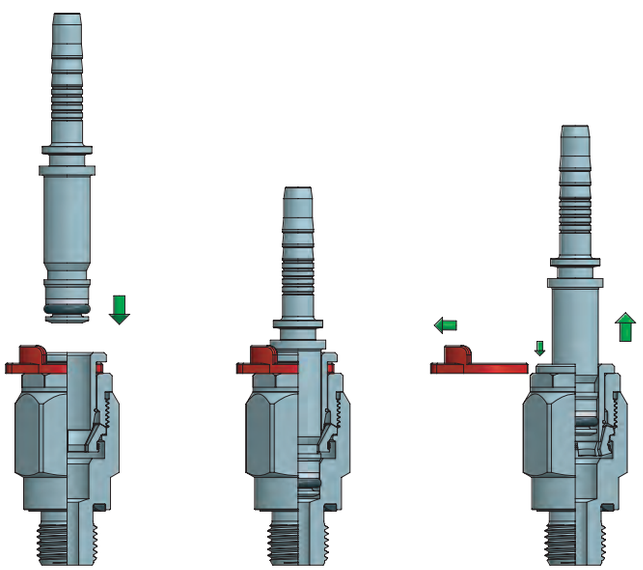
1. Assurez-vous que le back up ring et le joint d'étanchéité sont assemblés et graissés sur le raccordement du tube.
2. Poussez le raccordement jusqu'au fond du raccord; la connexion est possible même si la bague de sécurité est en place sous le poussoir du raccord.

Débranchement du tube
1. Retirez la bague de sécurité
2. Appuyez sur la poussoir et retirez le raccordement du tube

MONTAGEANWEISUNGEN

1. Stellen Sie sicher, dass der Stützring und der Dichtring an der Schlauchverbindung montiert und beschmiert sind.
2. Stecken Sie die gerade Schlauchverbindung bis zum Anschlag in die Verschraubung. Die Schlauchverbindung kann auch gemacht werden, wenn der Sicherheitsring an der Verschraubung angebracht ist,

Schlauchlösen
1. Der Sicherheitsring unter dem Verschraubungsloesering entfernen.
2. Auf dem Lösering drücken und die Schlauchverbindung aus der Verschraubung rausziehen.



Effettuato il collegamento, assicurarsi che il tubo inserito nel raccordo non sia sottoposto ad alcuna forza di trazione; è necessario inoltre rispettare durante il collegamento del tubo il raggio minimo di curvatura consigliato così come riportato nella sezione tubi di questo catalogo tecnico (vedi pag. 363)
Al fine di evitare lo sgancio involontario del tubo dal raccordo a causa di una pressione accidentale dell'anello estrattore occorre verificare che l'anello di sicurezza sia sempre montato sul raccordo durante il funzionamento in pressione. L'anello di sicurezza è provvisto di un foro a cui collegare un cavo di fissaggio per evitarne lo smarrimento; in alternativa è disponibile un KIT in cui l'anello di scurezza viene fornito preassemblato con un cavo per il suo ancoraggio al corpo del raccordo
Per il serraggio delle parti filettate del raccordo si raccomanda di attenersi alle coppie consigliate riportate a pag.6

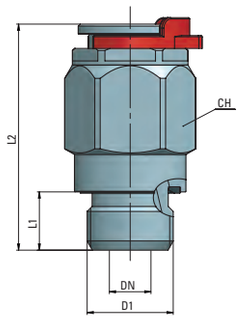
Once the tubing is connected to the fitting, make sure that the tubing is not subject to any tensile strength and that the min. recommended bending radius stated in the tubing section of this catalogue is complied with (see page 363).
In order to prevent an involuntary hose disconnection due to an accidental pressure on the fitting release ring, make sure that the safety ring is always in place when the fitting is pressurized. The safety ring shape allows for a fixing wire to be connected. A KIT is also available and it contains the safety ring pre-assembled with the fixing wire. To tighten threads, please check out our tightening torque chart illustrated at page 6.

Une fois effectué le branchement, s'assurer que le tube inséré dans le raccord n'est soumis à aucune force de traction. Egalement, il est nécessaire de respecter, lors du branchement du tube, le rayon minimum de courbure conseillé dans la section tubes de ce catalogue technique (voir la page 363). Pour éviter toute déconnexion involontaire du tube due à une pression accidentelle sur le poussoir du raccord, assurez-vous que la bague de sécurité est toujours en place lorsque le raccord est sous pression. La forme de la bague de sécurité permet de connecter un fil de fixation. Un KIT est également disponible et contient la bague de sécurité prémontée avec le fil de fixation. Pour le serrage des parties filetées du raccord, il est recommandé de s'en tenir aux couples de serrage conseillés et reportés à la page 6.

Nach der Schlauchverbindung, sicherstellen, dass der in die Verschraubung eingeführte Schlauch keinen Zugbelastungen ausgesetzt ist; beim Anschluss des Schlauchs muss der empfohlene Mindestbiegeradius eingehalten werden, gemäß den in diesem technischen Katalog im Schlauchabschnitt, angegebenen Hinweisen (siehe Seite 363).
Um ein ungewolltes Lösen des Schlauchs durch versehentlichen Druck auf den Verschraubungsloesring zu verhindern, stellen Sie sicher, dass der Sicherheitsring immer angebracht ist, wenn die Verschraubung unter Druck steht. Die Sicherheitsringbauform ermöglicht das Anschließen eines Befestigungsdrahtes. Ein KIT ist ebenfalls erhältlich und enthält den mit dem Befestigungsdraht vormontierten Sicherheitsring.
Zum Festziehen der Gewinde sich an den, auf Seite 6, empfohlenen Drehmomente einhalten.

QO 12

Raccordo diritto con filetto BSPP | Straight push-in fitting, BSPP thread | Raccord instantané droit, BSPP | Gerade Steckverschraubung, BSPP

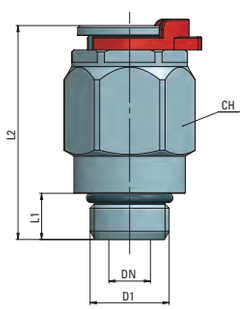


Type	DN Dash	D1	L1	L2	CH	g ⚖
12 04 G1/4	**04**	**G1/4**	12	46	20	60,9
12 06 G3/8	**06**	**G3/8**	12	48	24	85,5
12 08 G1/2	**08**	**G1/2**	14	54,4	28	128,7
12 12 G3/4	**12**	**G3/4**	16	62,1	38	231,5

BSPP (ISO 1179-2)

QO 12

Raccordo diritto con filetto UNF | Straight push-in fitting, UNF thread | Raccord instantané droit, UNF | Gerade Steckverschraubung, UNF

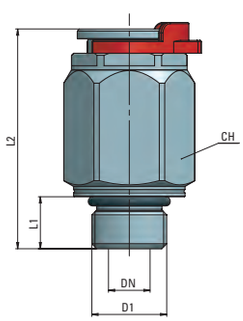


Type	DN Dash	D1	L1	L2	CH	g ⚖
12 04 7/16 UNF ORB	**04**	**7/16-20**	9,1	42,6	20	-
12 06 9/16 UNF ORB	**06**	**9/16-18**	10	45,3	24	-
12 08 3/4-16 UNF ORB	**08**	**3/4-16-16**	11,1	51,4	28	-
12 12 1-1/16 UN ORB	**12**	**1 1/16-12**	15,1	60,6	38	-

SAE Oring Boss - UNF Stud (ISO 11926-3)

QO 12

Raccordo diritto con filetto metrico | Straight push-in fitting, metric | Raccord instantané droit, filetage métrique | Gerade Steckverschraubung, metrisch

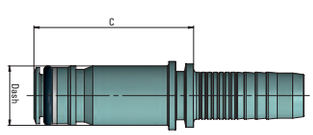


Type	DN Dash	D1	L1	L2	CH	g ⚖
12 04 M14x1,5	**04**	**M14x1,5**	11	44	20	36,8
12 06 M16x1,5	**06**	**M16x1,5**	11,5	46,7	24	84,7
12 08 M18x1,5	**08**	**M18x1,5**	12,5	52,9	28	79,3
12 12 M22x1,5	**12**	**M22x1,5**	13	60,1	38	-

Metric Stud (ISO 6149-3)

QO 90

Terminale diritto | Hose connection, straight | Raccordement tube, droit | Gerade Schlauchverbindung



Type	DN Dash	Hose ID (inch)	Hose ID (mm)	C CUT OFF (mm)	g ⚖
90 04 1/4	**04**	**1/4**	6,2	38,2	21,6
90 06 3/8	**06**	**3/8**	9,5	40,3	38,2
90 08 1/2	**08**	**1/2**	12,9	45,6	64,3
90 12 3/4	**12**	**3/4**	19	52,1	132,5

Corpo in Acciaio indurito e zincato 11SMnPb37 - Body in Hardened Zinc plated steel 11SMnPb37 - Corps en Acier trempé et zingué 11SMnPb37 - Körper aus Stahl gehärtet und verzinkt 11SMnPb37

Al primo inserimento assicurarsi che la guarnizione presente sull'innesto sia adeguatamente lubrificata e/o ingrassata.

During the first assembly, make sure that the oring on the plug is well lubricated/greased.

Pendant le premier montage se rassurer que le joint sur l'embout soit bien lubrifié/graissé.

Anlaesslich der ersten Montage bitte die Dichtung am Stecker ausreichend schmieren.

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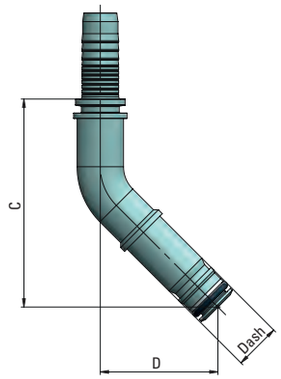
QO 91

Terminale 45° | 45° hose connection | Raccordement tube, 45° | 45°Schlauchverbindung



Type	DN Dash	Hose ID (inch)	Hose ID (mm)	C CUT OFF (mm)	D DROP (mm)	g ⚖
91 04 1/4	04	1/4	6,2	62,2	37,6	41,7
91 06 3/8	06	3/8	9,5	67,6	40,3	72,3
91 08 1/2	08	1/2	12,9	76	43	122,2
91 12 3/4	12	3/4	19	97,5	56,4	275

Corpo in Acciaio indurito e zincato 11SMnPb37 - Body in Hardened Zinc plated steel 11SMnPb37 - Corps en Acier trempé et zingué 11SMnPb37 - Körper aus Stahl gehärtet und verzinkt 11SMnPb37

Al primo inserimento assicurarsi che la guarnizione presente sull'innesto sia adeguatamente lubrificata e/o ingrassata.

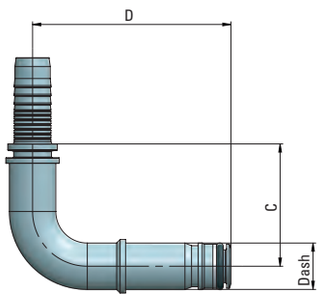
During the first assembly, make sure that the oring on the plug is well lubricated/greased.

Pendant le premier montage se rassurer que le joint sur l'embout soit bien lubrifié/graissé.

Anlaesslich der ersten Montage bitte die Dichtung am Stecker ausreichend schmieren.

QO 92

Terminale 90° | 90° hose connection | Raccordement tube, 90° | 90° Schlauchverbindung



Type	DN Dash	Hose ID (inch)	Hose ID (mm)	C CUT OFF (mm)	D DROP (mm)	g ⚖
92 04 1/4	04	1/4	6,2	33,3	62	47,6
92 06 3/8	06	3/8	9,5	37,9	67,5	82,2
92 08 1/2	08	1/2	12,9	44,7	72,5	141,3
92 12 3/4	12	3/4	19	59,8	98,5	327

Corpo in Acciaio indurito e zincato 11SMnPb37 - Body in Hardened Zinc plated steel 11SMnPb37 - Corps en Acier trempé et zingué 11SMnPb37 - Körper aus Stahl gehärtet und verzinkt 11SMnPb37

Al primo inserimento assicurarsi che la guarnizione presente sull'innesto sia adeguatamente lubrificata e/o ingrassata.

During the first assembly, make sure that the oring on the plug is well lubricated/greased.

Pendant le premier montage se rassurer que le joint sur l'embout soit bien lubrifié/graissé.

Anlaesslich der ersten Montage bitte die Dichtung am Stecker ausreichend schmieren.

SAFETY KIT

Type	g ⚖
SAFETY KIT DASH 04	-
SAFETY KIT DASH 06	-
SAFETY KIT DASH 08	-
SAFETY KIT DASH 12	-

Q0 10

Raccordo a cartuccia

La cartuccia Q010 è la soluzione ottimale in caso di problemi di ingombro; il design compatto ne permette infatti un montaggio quasi completamente a scomparsa all'interno dei corpi di utilizzo (manifold, valvole, etc...).

Push-in cartridge fitting

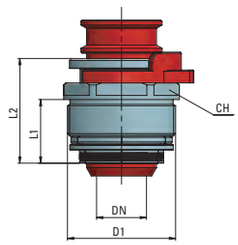
The Q010 cartridge is the right solution in case of lack of space; the compact design allows for the assembly of the cartridge in such a way that it almost completely disappears once assembled in its own body (manifolds/ valves etc)

Raccord instantané à cartouche

La cartouche Q010 est la bonne solution en cas de manque d'espace. Le design compacte permet l'assemblage de la cartouche de telle sorte qu'elle disparait presque complètement une fois assemblée dans son propre corps (collecteurs / vannes, etc.)

Einschraubsteckpatrone

Die Q010-Patrone ist die richtige Lösung beim Platzmangel. Die kompakte Bauweise ermöglicht die Montage der Patrone, so dass sie nach der Montage in ihrem eigenen Körper (Verteiler / Ventile usw.) fast vollständig verschwindet.



Type	DN Dash	D1	L1	L2	CH	g
10 04 00	**04**	**M18x1**	13,2	21,7	17	21,9
10 06 00	**06**	**M22x1**	14	23,2	21	32,3
10 08 00	**08**	**M26x1**	15,5	25,4	25	47,3
10 12 00	**12**	**M34x1**	18,4	27,8	32	81

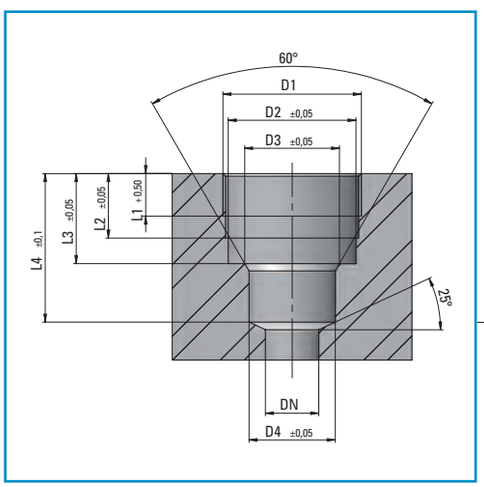
Schema di foratura

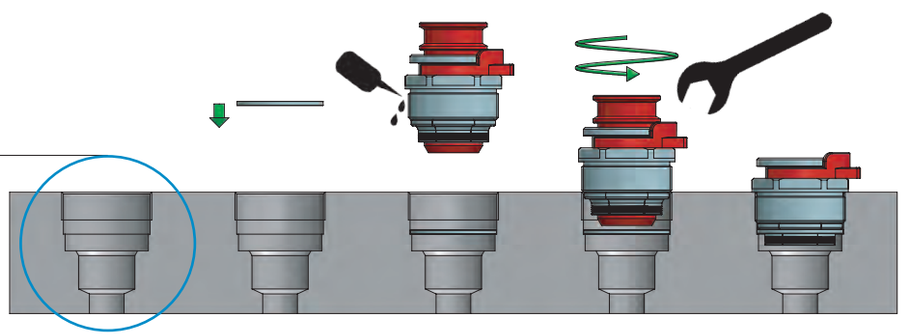
Cartridge seat drilling plan

Plan de forage des cartouches

Patronensitzbohrungskizze

DN (Dash)	D1	D2	D3	D4	L1	L2	L3	L4
04	M18x1	16,2	10,8	9,4	8	10,6	14,4	23,1
06	M22x1	20	14	12,25	8,5	11	15,3	24,3
08	M26x1	24	17,8	16,2	9	12,1	16,9	27,9
12	M34x1	32,2	25	23	12	15	20,6	32,6





1 2 3 4

1 Realizzare la sede della cartuccia seguendo lo schema dimensionale;
2 Inserire il distanziale fornito con la cartuccia sul fondo della sede come riportato in illustrazione;
3 Deporre un leggero strato di frenafiletto sul filetto della cartuccia;
4 Avvitare la cartuccia nella sua sede assicurandosi di arrivare in battuta.

1. Machine the cartridge seating according to the drawing stated below;
2. Place at the bottom of the seating the distance ring provided with the cartridge, as shown in the picture;
3. Apply a light layer of threadlocking sealant on the cartridge thread;
4. Screw the cartridge all the way into its seating until it bottoms.

1. Usinez le logement de la cartouche conformément au dessin ci-dessous;
2. Placez au fond du logement la bague d'écartement fournie avec la cartouche, comme indiqué sur la photo;
3. Appliquez une légère couche de freinfilet sur le filetage de la cartouche;
4. Vissez la cartouche jusqu'au fond dans son logement.

1. Das Patronegehäuse gemäss der unten angegebenen Zeichnung fertigen;
2. Legen Sie den, mit der Patronen gelieferten Distanzring, im Patronengehäuse gemäss Abbildung;
3. Versehen Sie das Patronengewinde mit einer dünnen Schicht von Schraubensicherung;
4. Schlussendlich ziehen Sie das Patrone in das Gehäuse bis zum Anschlag fest.

MC LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi a Calzamento in Ottone Nichelato
Brass Nickel-Plated Push-on Fittings
Raccords à coiffe en laiton nickelé
Schnellverschraubungen aus Messing vernickelt

I

I Raccordi a Calzamento della serie MC sono provvisti di un cono di calzamento la cui forma assicura, una volta calzato il tubo e serrato adeguatamente il dado, la perfetta tenuta pneumatica.
Tutti i raccordi della serie MC vengono sottoposti ad un trattamento superficiale di Nichelatura elettrolitica.

GB

The Push-on Fittings of the MC line are provided with a cone to ensure the perfect tightness once the tubing is assembled and the nut tightened.
All MC fittings are electrolytic nickel plated.

F

Les raccords à coiffe de la série MC sont pourvu d'un cône, dont la forme permet, une fois inséré le tube et serré l'écrou, la tenue pneumatique parfaite.
Tous les raccords de la série MC sont soumis à nickelage électrolytique.

D

Die Überwurfmutterverschraubungen der MC Baureihe sind mit einem Konus versehen, deren Bauform die perfekte pneumatische Dichtheit gewährleistet, nachdem der Schlauch montiert und die Überwurfmutter festgezogen ist.
Alle MC Verschraubungen sind aus Messing, elektrolytisch vernickelt.

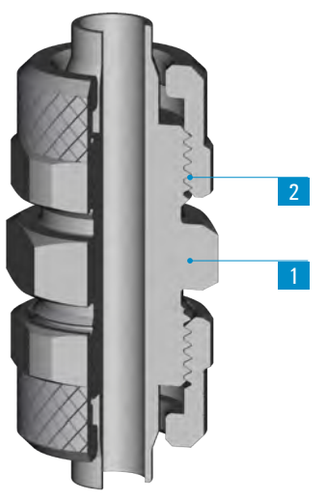
MC

1	2
Corpo del raccordo Fitting Body Corps du raccord Verschraubungskörper	Dado Nut Ecrou Überwürfmutter
Ottone UNI EN 12164 CW614N - UNI EN 12165 CW617N Nichelato Brass UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickel Plated Laiton UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickelé Messing UNI EN 12164 CW614N - UNI EN 12165 CW617N vernickelt	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel Plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt

-40°C ÷ 150°C

Max 25 bar

-99 KPa



	M5x0,8	G1/8	G1/4	G3/8	G1/2	R1/8	R1/4	R3/8	R1/2
4	●	●				●			
5	●	●				●			
6	●	●	●	●		●	●	●	
8		●	●	●		●	●	●	
10		●	●	●	●	●	●	●	●
12				●	●			●	●
15					●				●

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, Polietilene PE,
Poliuretano PU.
Tolleranze accettabili sui tubi:
+/– 0,07 mm fino a Ø 10 mm
+/– 0,1 mm fino Ø 15 mm.

Campi di applicazione:
Impianti pneumatici.

DATA SHEET

Recommended tubings:
PA11, PA12, Polyethylene PE,
Polyurethane PU
Acceptable Tolerances on the tubings:
+/– 0,07 mm up to Ø 10 mm
+/– 0,1 mm up to Ø 15 mm

Application fields:
Pneumatic circuits.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
PA11, PA12, PA6, Polyéthyléne PE,
Polyuréthane PU.
Tolerances sur les tubes:
+/– 0,07 mm jusqu'au Ø 10 mm
+/– 0,1 mm jusqu'au Ø 15 mm.

Domaines d'application:
Circuits pneumatiques.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyethylen PE,
Polyurethan PU.
Schlauchtoleranzen:
+/– 0,07 mm bis Ø 10 mm
+/– 0,1 mm bis Ø 15 mm.

Anwendungsbereiche:
Pneumatische Anlagen.

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ISTRUZIONI DI MONTAGGIO

1. Tagliare il tubo a 90° verificandol'assenza su questo di bave interne ed esterne;
2. Inserire il dado sul tubo;
3. Fare "calzare" il tubo sul cono assicurandosi che vada in battuta;
4. Avvitare il dado di serraggio a mano o servendosi di una chiave.

ASSEMBLY INSTRUCTIONS

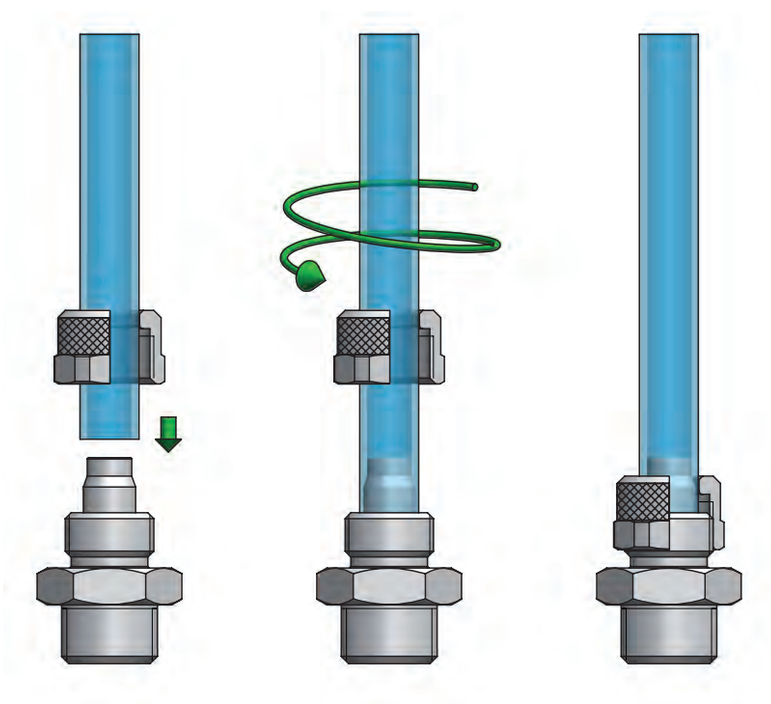
1. Cut the tube at 90° making sure that no burr is left;
2. Push the nut onto the tube;
3. Push the tube and nut onto the fitting nozzle and make sure that the tube goes all the way up to the nozzle base;
4. Tighten the nut by hand or if necessary by a spanner.

INSTRUCTIONS DE MONTAGE

1. Couper le tube à 90° sans laisser des bavures;
2. Faire glisser le tube dans l'écrou;
3. Pousser le tube sur le cône du raccord en faisant attention que le tube appuye jusqu'au fond du cône;
4. Visser l'écrou à la main, ou si necessaire, par une clé.

MONTAGEANWEISUNGEN

1. Schlauch bei 90° abschneiden und entgraten
2. Schlauch in die Überwurfmutter einstecken;
3. Schlauch und Überwürfmutter auf den Verschraubungskonus gleiten lassen bis zum Konusanschlag;
4. Überwurfmutter von Hand oder wenn notwendig mit einem Schlüssel befestigen.



Effettuato il collegamento, assicurarsi che il tubo inserito nel raccordo non sia sottoposto ad alcuna forza di trazione; è necessario inoltre rispettare durante il collegamento del tubo il raggio minimo di curvatura consigliato così come riportato nella sezione tubi di questo catalogo tecnico (vedi pag. 363).
Per il serraggio delle parti filettate del raccordo si raccomanda di attenersi alle coppie consigliate riportate a pag.6

Once the tubing is connected to the fitting, make sure that the tubing is not subject to any tensile strength and that the min. recommended bending radius stated in the tubing section of this catalogue is complied with (see page 363).
To tighten threads, please check out our tightening torque chart illustrated at page 6.

Une fois effectué le branchement, s'assurer que le tube inséré dans le raccord n'est soumis à aucune force de traction. Egalement, il est nécessaire de respecter, lors du branchement du tube, le rayon minimum de courbure conseillé dans la section tubes de ce catalogue technique (voir la page 363).
Pour le serrage des parties filetées du raccord, il est recommandé de s'en tenir aux couples de serrage conseillés et reportés à la page 6.

Nach der Schlauchverbindung, sicherstellen, dass der in die Verschraubung eingeführte Schlauch keinen Zugbelastungen ausgesetzt ist; beim Anschluss des Schlauchs muss der empfohlene Mindestbiegeradius eingehalten werden, gemäß den in diesem technischen Katalog im Schlauchabschnitt, angegebenen Hinweisen (siehe Seite 363).
Zum Festziehen der Gewinde sich an den, auf Seite 6, empfohlenen Drehmomente einhalten.

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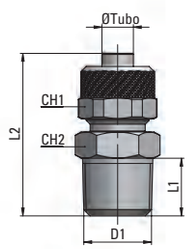
MC 11

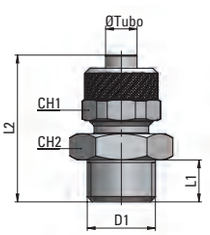
Diritto maschio conico | Taper straight, male | Union simple mâle conique | Gerade Einschraubverschraubung, kegelig



Type	Ø Tubo	D1	L1	L2	CH1	CH2	g
11 04 18	4-2,5	R1/8	7,5	23,5	7	11	7,4
11 05 18	5-3	R1/8	8	25	8	12	8,6
11 06 18	6-4	R1/8	8	27,5	12	12	15
11 06 14	6-4	R1/4	11	31	12	14	20,6
11 06 38	6-4	R3/8	11,5	31,5	12	17	23,9
11 08 18	8-6	R1/8	8	27,5	14	12	17,7
11 08 14	8-6	R1/4	11	31	14	14	22,5
11 08 38	8-6	R3/8	11,5	31,5	14	17	27,4
11 10 18	10-8	R1/8	8	29,5	16	14	22
11 10 14	10-8	R1/4	11	32,5	16	14	26,6
11 10 38	10-8	R3/8	11,5	33	16	17	33,1
11 10 12	10-8	R1/2	14	36	16	22	48,3
11 12 38	12-10	R3/8	11,5	34,5	18	17	37,3
11 12 12	12-10	R1/2	14	37,5	18	22	49,5
11 15 12	15-12,5	R1/2	14	39,5	22	22	61,9

MC 12

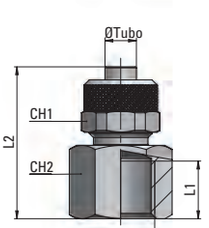
Diritto maschio cilindrico | Parallel straight, male | Union simple mâle cylindrique | Gerade Einschraubverschraubung, zylindrisch



Type	Ø Tubo	D1	L1	L2	CH1	CH2	g
12 04 M5	4-2,5	M5x0,8	5	20	7	7	3,4
12 04 18	4-2,5	G1/8	6	22,5	7	14	9,7
12 05 M5	5-3	M5x0,8	4	20	8	8	4,8
12 05 18	5-3	G1/8	6	23	8	14	10,6
12 06 M5	6-4	M5x0,8	4	21	9	8	6,1
12 06 18	6-4	G1/8	6	25,5	12	14	16,4
12 06 14	6-4	G1/4	8	28	12	17	21
12 06 38	6-4	G3/8	9	29	12	19	27,5
12 08 18	8-6	G1/8	6	25,5	14	14	19,5
12 08 14	8-6	G1/4	8	28	14	17	25,2
12 08 38	8-6	G3/8	9	29	14	19	30,1
12 10 18	10-8	G1/8	6	27,5	16	14	22,9
12 10 14	10-8	G1/4	8	29,5	16	17	29,4
12 10 38	10-8	G3/8	9	30,5	16	19	32,6
12 10 12	10-8	G1/2	10	32	16	24	45,1
12 12 38	12-10	G3/8	9	32	18	19	38,1
12 12 12	12-10	G1/2	10	33,5	18	24	53,2
12 15 12	15-12,5	G1/2	10	33,5	22	24	60,9

MC 13

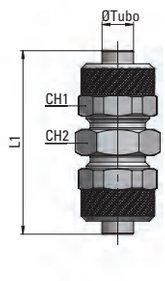
Diritto femmina | Female straight | Union simple femelle | Gerade Aufschraubverschraubung



Type	Ø Tubo	D1	L1	L2	CH1	CH2	g
13 05 18	5-3	G1/8	8	22,5	8	14	12,4
13 06 18	6-4	G1/8	8	25	12	14	17,8
13 06 14	6-4	G1/4	11	29	12	17	25,8
13 08 18	8-6	G1/8	8	25	14	14	20,1
13 08 14	8-6	G1/4	11	29	14	17	27,5
13 08 38	8-6	G3/8	11,5	29,5	14	20	31,1
13 10 14	10-8	G1/4	11	30,5	16	17	32,2
13 10 38	10-8	G3/8	11,5	31	16	20	36,1
13 12 38	12-10	G3/8	11,5	32,5	18	20	39,7

MC 14

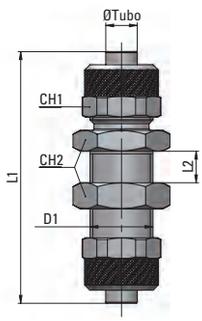
Giunzione intermedia | Union | Union simple égale | Gerade Verbindung



Type	Ø Tubo	D1	CH1	CH2	g ⚖
14 05 05	5-3	28,5	8	8	7,5
14 06 06	6-4	34,5	12	12	20,5
14 08 08	8-6	35	14	14	27,9
14 10 10	10-8	38	16	14	36
14 12 12	12-10	41	18	17	47
14 15 15	15-12,5	45,5	22	22	74,6

MC 15

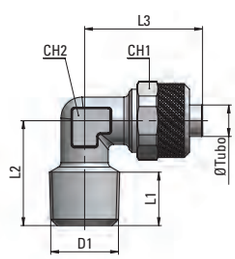
Giunzione intermedia passaparete | Bulkhead union | Union traversée de cloison | Gerade Schottverschraubung



Type	Øe Tubo	D1	L1	L2	CH1	CH2	g ⚖
15 05 05	5-3	M7x0,75	40	8,5	8	9	10,9
15 06 06	6-4	M10x1	48	10,5	12	14	33,2
15 08 08	8-6	M12x1	48	10,5	14	16	42,6
15 10 10	10-8	M14x1	50	8,5	16	17	56
15 12 12	12-10	M16x1	53	8,5	18	19	75,3
15 15 15	15-12,5	M20x1	58	8,5	22	24	104,6

MC 16

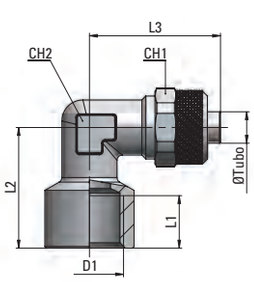
Gomito maschio conico | Taper elbow fitting, male | Raccord à coude mâle conique | Winkelverschraubung, kegelig



Type	Ø Tubo	D1	L1	L2	L3	CH1	CH2	g ⚖
16 04 M5	4-2,5	M5x0,8	5	15,5	20	7	9	10,4
16 04 18	4-2,5	R1/8	7,5	17	20	7	9	10,7
16 05 18	5-3	R1/8	8	17	21,5	8	8	10,8
16 06 18	6-4	R1/8	8	17	22,5	12	8	16,2
16 06 14	6-4	R1/4	11	20	22,5	12	10	21,6
16 06 38	6-4	R3/8	11,5	22,5	23,5	12	11	30,3
16 08 18	8-6	R1/8	8	17	22,5	14	10	19,4
16 08 14	8-6	R1/4	11	20	22,5	14	10	23,3
16 08 38	8-6	R3/8	11,5	22,5	24	14	11	31
16 10 18	10-8	R1/8	8	18,5	25,5	16	11	27,6
16 10 14	10-8	R1/4	11	21,5	25,5	16	11	30,5
16 10 38	10-8	R3/8	11,5	22,5	25,5	16	11	34,7
16 12 38	12-10	R3/8	11,5	24,5	30	18	14	46
16 12 12	12-10	R1/2	14	28	30,5	18	17	66,5
16 15 12	15-12,5	R1/2	14	28	34	22	17	69,6

MC 17

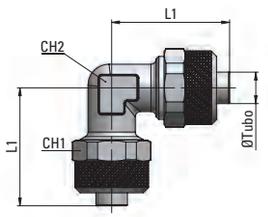
Gomito femmina | Female elbow | Raccord à coude femelle | Winkel-Aufschraubverschraubung



Type	Ø Tubo	D1	L1	L2	L3	CH1	CH2	g ⚖
17 05 18	5-3	G1/8	8	19	21,5	8	10	20,8
17 06 18	6-4	G1/8	8	19	22,7	12	10	20,5
17 06 14	6-4	G1/4	11	23	24,5	12	11	30,6
17 08 18	8-6	G1/8	8	19	22,7	14	10	23
17 08 14	8-6	G1/4	11	23	25	14	11	31
17 10 14	10-8	G1/4	11	23,5	26	16	13	39,2
17 12 38	12-10	G3/8	11,5	28	30,5	18	17	61,3

MC 18

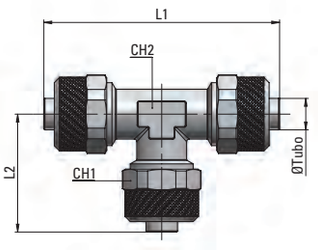
Gomito intermedio | Union elbow | Raccord à coude | Winkelverschraubung



Type	Ø Tubo	L1	CH1	CH2	g
18 05 05	5-3	21,5	8	8	13,1
18 06 06	6-4	21,5	12	8	22,7
18 08 08	8-6	22,5	14	10	28,4
18 10 10	10-8	25,5	16	11	38,6
18 12 12	12-10	30	18	14	58
18 15 15	15-12,5	34	22	17	84,3

MC 19

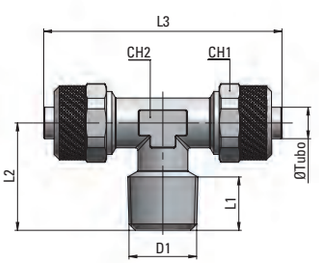
T intermedio | Union tee | T égal | T-Verschraubung



Type	Ø Tubo	L1	L2	CH1	CH2	g
19 05 05	5-3	43	21,5	8	8	18,6
19 06 06	6-4	45	22,5	12	8	32,1
19 08 08	8-6	45	22,5	14	10	41,3
19 10 10	10-8	51	25,5	16	11	54,5
19 12 12	12-10	60	30	18	14	84,9
19 15 15	15-12,5	68	34	22	17	124,2

MC 20

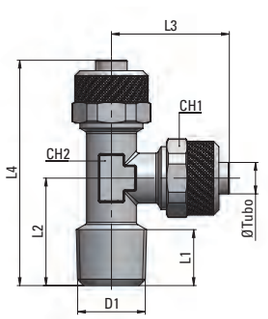
T centrale conico | Taper male tee | T mâle, central | T-Einschraubverschraubung



Type	Ø Tubo	D1	L1	L2	L3	CH1	CH2	g
20 05 18	5-3	R1/8	8	17	43	8	8	17,5
20 06 18	6-4	R1/8	8	17	45	12	8	27
20 06 14	6-4	R1/4	11	20,5	45,5	12	10	35,2
20 08 18	8-6	R1/8	8	17,5	45,5	14	10	33,6
20 08 14	8-6	R1/4	11	20,5	45,5	14	10	37,7
20 10 14	10-8	R1/4	11	21,5	51	16	11	48
20 10 38	10-8	R3/8	11,5	22,5	51	16	11	51,1
20 12 38	12-10	R3/8	11,5	24,5	60	18	14	69,5
20 12 12	12-10	R1/2	14	28	61	18	17	99,4
20 15 12	15-12,5	R1/2	14	28	68	22	17	108,3

MC 21

T laterale conico | Taper lateral tee | T mâle, latéral | T-Einschraubverschraubung



Type	Ø Tubo	D1	L1	L2	L3	L4	CH1	CH2	g
21 05 18	5-3	R1/8	8	17	21,5	38,5	8	8	17,7
21 06 18	6-4	R1/8	8	17	22,5	39,5	12	8	25,8
21 06 14	6-4	R1/4	11	20,7	22,7	43,5	12	10	33,8
21 08 18	8-6	R1/8	8	17,7	22,7	40,5	14	10	36,9
21 08 14	8-6	R1/4	11	20,7	22,7	43,5	14	10	36,3
21 10 14	10-8	R1/4	11	21	25,5	46,5	16	11	47,4
21 10 38	10-8	R3/8	11,5	22,5	25,5	48	16	11	51,2
21 12 38	12-10	R3/8	11,5	24,5	30	54,5	18	14	72,2
21 12 12	12-10	R1/2	14	28	30,5	58,5	18	17	99,1
21 15 12	15-12,5	R1/2	14	28	34	62	22	17	107,1

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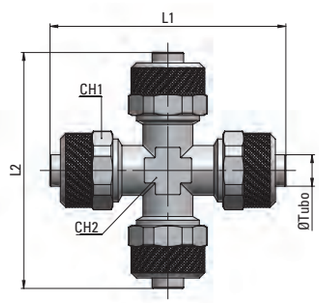
MC 22

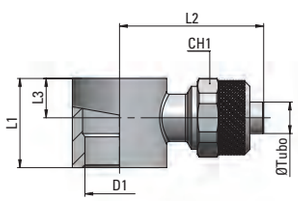
Croce | Cross fitting | Raccord à croix | Kreuzstück



Type	Ø Tubo	L1	L2	CH1	CH2	g
22 05 00	5-3	43	43	8	8	45,4
22 06 00	6-4	45	45	12	8	45,6
22 08 00	8-6	45	45	14	10	53,1
22 10 00	10-8	51	51	16	11	72,3

MC 23

Anello singolo | Single banjo ring | Banjo simple | Ringstück

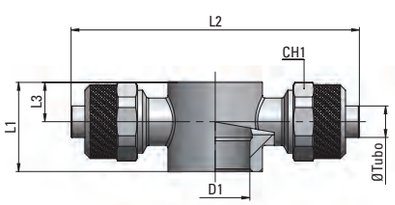


Type	Ø Tubo	D1	L1	L2	L3	CH1	g
23 04 M5	4-2,5	5,1	9	19	4,5	7	7,6
23 04 M5 /R	4-2,5	7	10	19	3,5	7	5,5
23 04 18	4-2,5	10	15	21,5	6	7	12,7
23 05 M5	5-3	5,1	9	20	4,5	8	7,3
23 05 M5 /R	5-3	7	10	20	3,5	8	6,5
23 05 18	5-3	10	15	23	6	8	20,5
23 06 M5	6-4	5,1	9	20	4,5	9	7,9
23 06 M5 /R	6-4	7	10	20	3,5	9	6,8
23 06 18	6-4	10	15	25	6	12	19,2
23 06 14	6-4	13,2	17	26,5	7,5	12	25,6
23 08 18	8-6	10	15	25	6	14	19,5
23 08 14	8-6	13,2	17	27,5	7,5	14	27,4
23 08 38	8-6	17	20	29,5	7,5	14	39
23 10 14	10-8	13,2	17	28,5	7,5	16	29,2
23 10 38	10-8	17	20	30,5	7,5	16	41,5

/R = Solo per regolatori di flusso - For flow controls only- Seulement pour les réducteurs de débit - Nur für Drosselrückschlagventil

MC 24

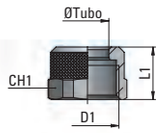
Anello doppio | Double banjo ring | Banjo double | Zweifaches Ringstück



Type	Ø Tubo	D1	L1	L2	L3	CH1	g
24 05 M5	5-3	5,1	9	40	4,5	8	12
24 05 18	5-3	10	15	50	6	12	30,6
24 06 M5	6-4	5,1	9	40	4,5	9	12,7
24 06 18	6-4	10	15	50	6	12	30,1
24 06 14	6-4	13,2	17	53	7,5	12	35,5
24 08 18	8-6	10	15	50	6	14	31,9
24 08 14	8-6	13,2	17	55	7,5	14	38,9
24 08 38	8-6	17,1	20	59	7,5	14	51,4
24 10 14	10-8	13,2	17	57	7,5	16	44,5
24 10 38	10-8	17	20	61	7,5	16	56,1

MC 27

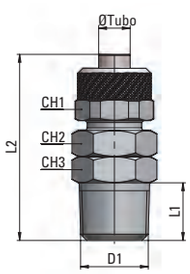
Dado | Nut | Écrou | Überwurfmutter



Type	Ø Tubo	D1	L1	CH1	g
27 04 07	4-2,5	M6x0,75	8	7	1,1
27 05 08	5-3	M7x0,75	9	8	1,2
27 06 08	6-4	M8x0,75	9	9	1,5
27 06 10	6-4	M10x1	10	12	4,1
27 08 12	8-6	M12x1	10	14	5
27 10 14	10-8	M14x1	11,5	16	6,5
27 12 16	12-10	M16x1	13	18	8,8
27 15 20	15-12,5	M20x1	15,5	22	14,3

MC 29

Diritto girevole conico | Swivelling taper straight | Union simple tournante, cônique | Gerade Verschraubung, kegelig



Type	Ø Tubo	D1	L1	L2	CH1	CH2	CH3	g
29 06 18	6-4	R1/8	8	37	12	12	12	16,3
29 06 14	6-4	R1/4	11	40	12	14	14	27,2
29 08 18	8-6	R1/8	8	37	14	12	12	20,4
29 08 14	8-6	R1/4	11	40	14	14	14	30,6
29 10 14	10-8	R1/4	11	42	16	14	14	32,1

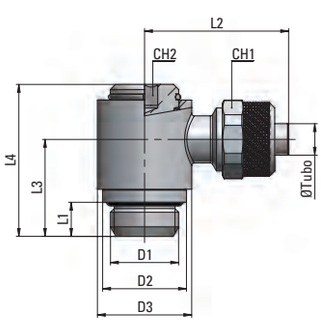
Guarnizioni in NBR - NBR seals - Joint d' ètancheité en NBR - NBR Dichtung

-20°C ÷ 80°C

Max 18 bar

MC 30

Girevole con anello singolo | Swivelling fitting with banjo ring | Raccord tournant avec banjo | Schwenkverschraubung mit Ringstück



Type	Ø Tubo	D1	D2	D3	L1	L2	L3	L4	CH1	CH2	g
30 06 18	6-4	G1/8	13	14	5	25	16,5	25,5	12	4	28,2
30 06 14	6-4	G1/4	16	18	6,5	26,5	18,5	29	12	5	41,9
30 08 18	8-6	G1/8	13	14	5	25	16,5	25,5	14	4	28,7
30 08 14	8-6	G1/4	16	18	6,5	27,5	18,5	29	14	5	44,1
30 10 14	10-8	G1/4	16	18	6,5	28,5	18,5	29	16	5	46,7
30 10 38	10-8	G3/8	20	22	7	30,5	22	32,5	16	6	68,7

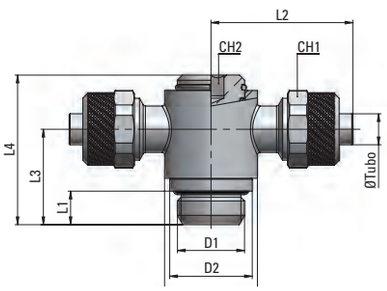
Guarnizioni NBR - NBR Seals- Joint d'éta nchéitéNBR - NBR Dichtung

-20°C ÷ 80°C

Max 18 bar

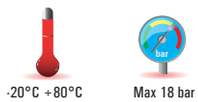
MC 31

Girevole con anello doppio | Swivelling fitting with double banjo ring | Raccord tournant avec banjo double | Drehbare Verschraubung mit zweifachem Ringstück



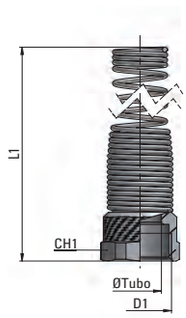
Type	Ø Tubo	D1	D2	D3	L1	L2	L3	L4	CH1	CH2	g
31 06 18	6-4	G1/8	13	14	5	25	16,5	25,5	12	4	39,2
31 06 14	6-4	G1/4	16	18	6,5	26,5	18,5	29	12	5	52,9
31 08 18	8-6	G1/8	14	14	5	25	16,5	25,5	14	4	41,2
31 08 14	8-6	G1/4	16	18	6,5	27,5	18,5	29	14	5	56
31 10 14	10-8	G1/4	16	18	6,5	28,5	18,5	29	16	5	64
31 10 38	10-8	G3/8	20	22	7	30,5	22	32,5	16	8	84,6

Guarnizioni NBR - NBR Seals- Joint d'étanchéitéNBR - NBR Dichtung



MC 32

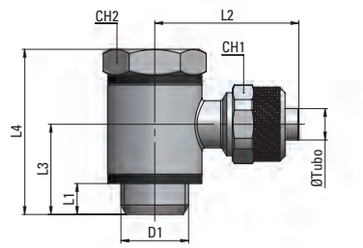
Dado con molla | Nut with protection spring | Ecrou avec ressort de protection | Überwurfmutter mit Schutzfeder

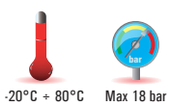


Type	Ø Tubo	D1	L1	CH1	g
32 06 04	6-4	M10x1	95	12	13,3
32 08 06	8-6	M12x1	93,5	14	17,1
32 10 08	10-8	M14x1	96,5	16	30,4

MC 34

Anello singolo orientabile | Swivelling elbow | Raccord à coude tournant | Schwenkverschraubung



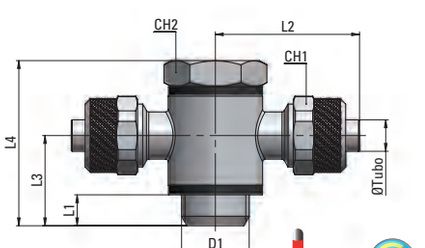


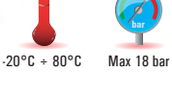
Type	Ø Tubo	D1	L1	L2	L3	L4	CH1	CH2	g
34 04 M5	4-2,5	M5x0,8	4,1	19	9,8	18,5	7	8	10,4
34 04 18	4-2,5	G1/8	4,4	21,5	15,2	27	7	14	27,5
34 05 M5	5-3	M5x0,8	4,1	20	9,8	18,5	8	8	10
34 05 18	5-3	G1/8	4,4	23	15,2	27	8	14	27
34 06 M5	6-4	M5x0,8	4,1	20	9,8	18,5	9	8	10,8
34 06 18	6-4	G1/8	4,4	25	15,2	27	12	14	32,5
34 06 14	6-4	G1/4	5,9	26,5	17,2	31,5	12	17	52,4
34 08 18	8-6	G1/8	4,4	25	15,2	27	14	14	33,6
34 08 14	8-6	G1/4	5,9	27,5	17,2	31,5	14	17	54,6
34 08 38	8-6	G3/8	6,4	29,5	20,7	36	14	20	83,4
34 10 14	10-8	G1/4	5,9	28,5	17,2	31,5	16	17	56,7
34 10 38	10-8	G3/8	6,4	30,5	20,7	36	16	20	86,2

Rondella in plastica PA6 - sealing ring - Bague ètancheité en PA6 - PA6 Dichtring

MC 36

T centrale orientabile | Swivelling tee | Raccord à té tournant | T-Schwenkverschraubung





Type	Ø Tubo	D1	L1	L2	L3	L4	CH1	CH2	g
36 05 M5	5-3	M5x0,8	4,1	20	9,8	18,5	8	8	14,3
36 05 18	5-3	G1/8	4,4	23	15,2	27	8	14	44,5
36 06 M5	6-4	M5x0,8	4,1	20	9,8	18,5	9	8	15,3
36 06 18	6-4	G1/8	4,4	25	15,2	27	12	14	44,1
36 06 14	6-4	G1/4	5,9	26,5	17,2	31,5	12	17	63,2
36 08 18	8-6	G1/8	4,4	25	15,2	27	14	14	46,3
36 08 14	8-6	G1/4	5,9	27,5	17,2	31,5	14	17	66,5
36 08 38	8-6	G3/8	6,4	29,5	20,7	36	14	20	96,2
36 10 14	10-8	G1/4	5,9	28,5	17,2	31,5	16	17	72,4
36 10 38	10-8	G3/8	6,4	30,5	20,7	36	16	20	103,3

Rondella in plastica PA6 - sealing ring - Bague ètancheité en PA6 - PA6 Dichtring

CX LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi a Calzamento in Acciaio Inox 316L
316L Stainless Steel Push-on Fittings
Raccords à coiffe en Acier Inox 316L
Schnellverschraubungen aus Edelstahl 1.4404

NSF COMPONENT

I

I "Raccordi a Calzamento" della serie CX grazie all'assenza di guarnizioni di tenuta e alla realizzazione del raccordo completamente in acciaio inossidabile AISI316L trovano applicazione in caso di temperature molto elevate e dove è necessario convogliare fluidi aggressivi non compatibili con guarnizioni in FPM.

GB

The CX is a "push on" fitting made of AISI 316L, completely free of Orings since conceived for heavy duty applications involving high temperatures, aggressive fluids and where also FPM Oring would not be suitable.

F

Les raccords à coiffe de la série CX sont en AISI 316L et complètement sans joints d'étanchéités, car conçu pour les emplois les plus lourdes comme en cas de température très élévée ou avec fluids très aggréssifs, avec lesquels les joints d'étanchéité en FPM ne sont pas compatibles.

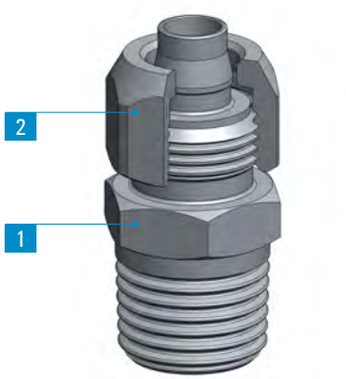
D

Unsere Überwürfmutterverschraubung aus AISI 316L ist ohne Dichtungen entwickelt worden, da sie als Idealserie für bestimmte Hochleistungsanwendungen, wie bei sehr hohen Temperaturen oder im Einsatz mit aggressiven Flüssigkeiten, wo FPM nicht kompatibel ist, gedacht ist.

CX

1	2	3
Corpo Body Corps Körper	Dado Nut Ecrou Überwürfmutter	Guarnizioni Seals Joint d'étanchéité Dichtung
Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404	Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404	FPM FDA FPM FDA FPM FDA

-40°C ÷ 250°C | Max 25 bar | -99 KPa



	R1/8	R1/4	R3/8	R1/2
6	●	●		
8	●	●		
10		●	●	
12		●	●	●

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
Tubo in PTFE
Tolleranze accettabili sui tubi:
+/– 0,07 mm fino a Ø 10 mm
+/– 0,1 mm fino Ø 12 mm.

Campi di applicazione:
Pneumatica, Industria Alimentare, Chimica e Medicale-Farmaceutica.

DATA SHEET

Recommended tubings:
PTFE tubings
Acceptable Tolerances on the tubings: +/– 0,07 mm up to Ø 10 mm
+/– 0,1 mm up to Ø 12 mm

Application fields:
Pneumatics, Food Industry, Chemical, Medical and Pharmaceutical Industry.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
Tube PTFE.
Tolerances sur les tubes:
+/– 0,07 mm jusqu'au Ø 10 mm
+/– 0,1 mm jusqu'au Ø 12 mm.

Domaines d'application:
Pneumatique, Industrie alimentaire, Chimique, Médicale et Pharmaceutique.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PTFEschlauch.
Schlauchtoleranzen:
+/– 0,07 mm bis Ø 10 mm
+/– 0,1 mm bis Ø 12 mm.

Anwendungsbereiche:
Pneumatik, Nahrungsindustrie, chemische, medikale und pharmazeutische Industrie.

ISTRUZIONI DI MONTAGGIO

1. Tagliare il tubo a 90° verificando l'assenza su questo di bave interne ed esterne;
2. Inserire il dado sul tubo;
3. Fare "calzare" il tubo sul cono assicurandosi che vada in battuta;
4. Avvitare il dado di serraggio a mano o servendosi di una chiave.

ASSEMBLY INSTRUCTIONS

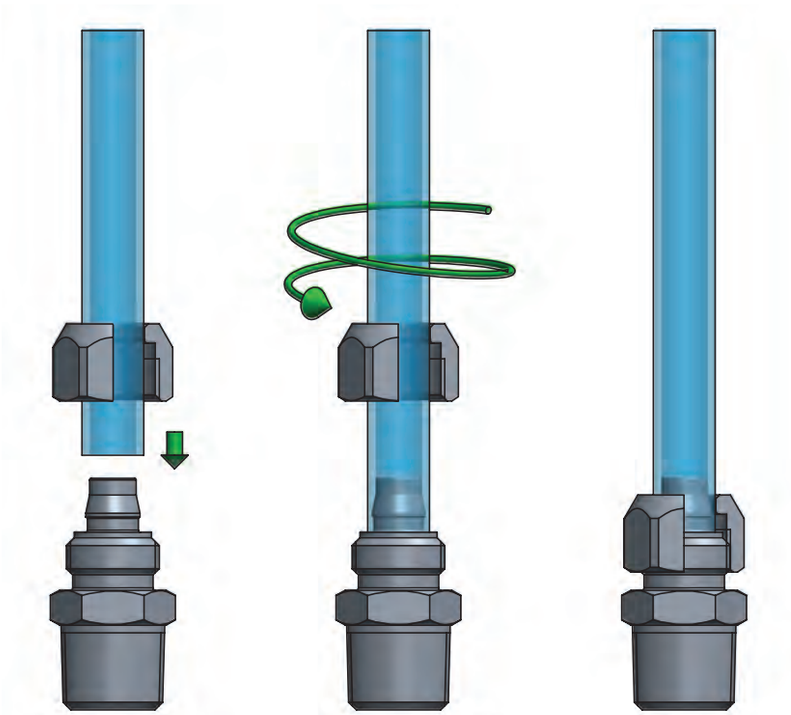
1. Cut the tube at 90° making sure that no burr is left;
2. Push the nut onto the tube;
3. Push the tube and nut onto the fitting nozzle and make sure that the tube goes all the way up to the nozzle base;
4. Tighten the nut by hand or if necessary by a spanner.

INSTRUCTIONS DE MONTAGE

1. Couper le tube à 90° sans laisser des bavures;
2. Faire glisser le tube dans l'écrou;
3. Pousser le tube sur le cône du raccord en faisant attention que le tube appuye jusqu'au fond du cône;
4. Visser l'écrou à la main, ou si necessaire, par une clé.

MONTAGEANWEISUNGEN

1. Schlauch bei 90° abschneiden und entgraten
2. Schlauch in die Überwurfmutter einstecken;
3. Schlauch und Überwürfmutter auf den Verschraubungskonus gleiten lassen bis zum Konusanschlag;
4. Überwurfmutter von Hand oder wenn notwendig mit einem Schlüssel befestigen.



Effettuato il collegamento, assicurarsi che il tubo inserito nel raccordo non sia sottoposto ad alcuna forza di trazione; è necessario inoltre rispettare durante il collegamento del tubo il raggio minimo di curvatura consigliato così come riportato nella sezione tubi di questo catalogo tecnico (vedi pag. 363)
Per il serraggio delle parti filettate del raccordo si raccomanda di attenersi alle coppie consigliate riportate a pag.6

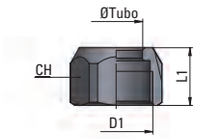
Once the tubing is connected to the fitting, make sure that the tubing is not subject to any tensile strength and that the min. recommended bending radius stated in the tubing section of this catalogue is complied with (see page 363).
To tighten threads, please check out our tightening torque chart illustrated at page 6.

Une fois effectué le branchement, s'assurer que le tube inséré dans le raccord n'est soumis à aucune force de traction. Egalement, il est nécessaire de respecter, lors du branchement du tube, le rayon minimum de courbure conseillé dans la section tubes de ce catalogue technique (voir la page 363).
Pour le serrage des parties filetées du raccord, il est recommandé de s'en tenir aux couples de serrage conseillés et reportés à la page 6.

Nach der Schlauchverbindung, sicherstellen, dass der in die Verschraubung eingeführte Schlauch keinen Zugbelastungen ausgesetzt ist; beim Anschluss des Schlauchs muss der empfohlene Mindestbiegeradius eingehalten werden, gemäß den in diesem technischen Katalog im Schlauchabschnitt, angegebenen Hinweisen (siehe Seite 363).
Zum Festziehen der Gewinde sich an den, auf Seite 6, empfohlenen Drehmomente einhalten.

CX 10

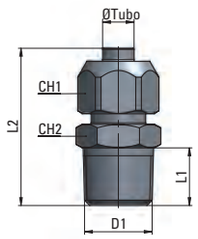
Dado | Nut | Écrou | Überwurfmutter



	Type	Ø Tubo	D1	L1	CH	g
	10 06 10	6-4	M10x1	10	12	4,4
	10 08 12	8-6	M12x1	10	14	5,5
	10 10 14	10-8	M14x1	11	16	7
new	10 12 16	12-10	M16x1	12	19	-

CX 11

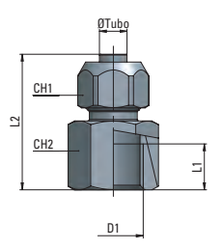
Diritto maschio conico | Taper straight, male | Union simple mâle conique | Gerade Einschraubverschraubung, kegelig



	Type	Ø Tubo	D1	L1	L2	CH1	CH2	g
	11 06 18	6-4	R1/8	7,5	26	12	10	11,6
	11 06 14	6-4	R1/4	11	29,5	12	14	17,5
	11 08 18	8-6	R1/8	7,5	26,5	14	13	16,5
	11 08 14	8-6	R1/4	11	30	14	14	20,3
	11 10 14	10-8	R1/4	11	32,5	16	14	23,6
	11 10 38	10-8	R3/8	11,5	33	16	17	29,9
new	11 12 14	12-10	R1/4	11	34	19	17	34,8
new	11 12 38	12-10	R3/8	11,5	34,5	19	17	-
new	11 12 12	12-10	R1/2	14	38	19	22	-

CX 13

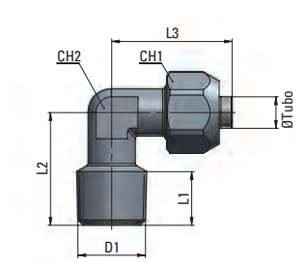
Diritto femmina | Female straight | Union simple femelle | Gerade Aufschraubverschraubung



	Type	Ø Tubo	D1	L1	L2	CH1	CH2	g
	13 06 18	6-4	G1/8	7	25	12	13	14,6
	13 06 14	6-4	G1/4	10	28,5	12	17	22,8
	13 08 18	8-6	G1/8	7	25,5	14	13	-
	13 08 14	8-6	G1/4	10	29,5	14	17	26,9
	13 08 38	8-6	G3/8	11	31	14	21	-
	13 10 14	10-8	G1/4	10	31,5	16	17	-
new	13 10 38	10-8	G3/8	11	33	16	17	40,8
new	13 12 38	12-10	G3/8	11	34,5	19	21	-
new	13 12 12	12-10	G1/2	11	35	19	24	-

CX 14

Gomito maschio conico | Taper elbow fitting, male | Raccord à coude mâle conique | Winkelverschraubung, kegelig

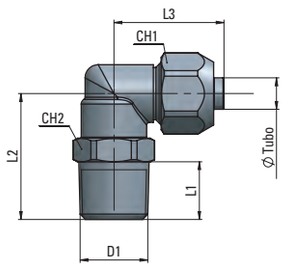


	Type	Ø Tubo	D1	L1	L2	L3	CH1	CH2	g
	14 06 18	6-4	R1/8	6,5	17	23	12	10	16,6
	14 06 14	6-4	R1/4	10	21,5	23	12	10	20,5
	14 08 18	8-6	R1/8	6,5	17	23,5	14	10	17,6
	14 08 14	8-6	R1/4	10	21,5	23,5	14	10	21,1
	14 10 14	10-8	R1/4	9,5	21,5	26	16	12	29,5
new	14 10 38	10-8	R3/8	11	24	26	16	12	-
new	14 12 38	12-10	R3/8	12,6	35,5	30,5	19	17	-
new	14 12 12	12-10	R1/2	13,5	30	33	19	19	-

trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

CX 15

Gomito maschio conico girevole | Taper swivelling elbow fitting, male | Raccord à coude tournant, mâle conique | Schwenkbare Winkelverschraubung, kegelig



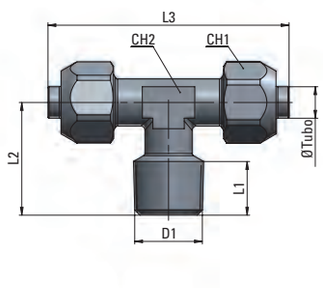
	Type	Ø Tubo	D1	L1	L2	L3	CH1	CH2	g
new	15 06 18	6-4	R1/8	7,5	20	21	12	13	-
new	15 06 14	6-4	R1/4	11	24	21	12	14	-
new	15 08 18	8-6	R1/8	7,5	20	21	14	13	-
new	15 08 14	8-6	R1/4	11	24	21	14	14	-
new	15 10 14	10-8	R1/4	11	25,5	24	16	14	-
new	15 10 38	10-8	R3/8	11,5	26	24	16	17	-

Guarnizioni FPM -FPM Seals - Joint d'étanchéité FPM - FPM Dichtung

-20°C ÷ 180°C | Max 20 bar

CX 20

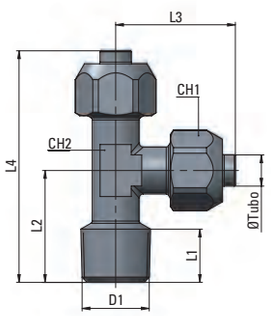
T centrale conico | Taper male tee | T mâle, central | T-Einschraubverschraubung



	Type	Ø Tubo	D1	L1	L2	L3	CH1	CH2	g
	20 06 18	6-4	R1/8	6,5	17	46	12	10	29
	20 06 14	6-4	R1/4	9,5	21	46	12	10	31,6
	20 08 18	8-6	R1/8	6,5	17	46	14	10	30,3
	20 08 14	8-6	R1/4	10	21,5	46	14	10	33,7
	20 10 14	10-8	R1/4	9,5	21,5	52	16	12	39,7
new	20 10 38	10-8	R3/8	11	24	52	16	12	-
new	20 12 38	12-10	R3/8	12,6	60	52	19	17	-
new	20 12 12	12-10	R1/2	13,9	60	52	19	17	-

CX 23

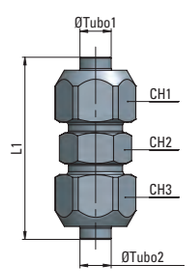
T laterale conico | Taper lateral tee | T mâle, latéral | T-Einschraubverschraubung



	Type	Ø Tubo	D1	L1	L2	L3	L4	CH1	CH2	g
	23 06 18	6-4	R1/8	9,9	17	23	40	12	10	28,3
	23 06 14	6-4	R1/4	10	21,5	23	44,5	12	10	31,2
	23 08 18	8-6	R1/8	6,5	17	23	40	14	10	30,4
	23 08 14	8-6	R1/4	10	21,5	23	44,5	14	10	34,1
	23 10 14	10-8	R1/4	9,5	21,5	26	47,5	16	12	39,5
new	23 10 38	10-8	R3/8	11	24	26	50	16	12	-
new	23 12 38	12-10	R3/8	12,6	25,5	30	55,5	19	17	-
new	23 12 12	12-10	R1/2	13,9	28	30	58	19	17	-

CX 26

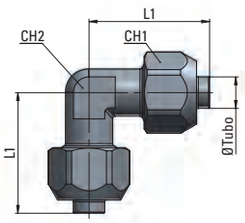
Giunzione intermedia | Union | Union simple égale | Gerade Verbindung



	Type	Ø Tubo1	Ø Tubo2	L1	CH1	CH2	CH3	g
	26 06 06	6-4	6-4	34	12	10	12	20
	26 08 08	8-6	8-6	35	14	12	14	25,7
new	26 08 06	8-6	6-4	34,5	14	12	12	23,5
	26 10 10	10-8	10-8	39	16	14	16	35,8
new	26 10 08	10-8	8-6	37	16	14	14	-
new	26 12 12	12-10	12-10	42	19	16	19	-
new	26 12 10	12-10	10-8	40,5	19	16	16	-

CX 28

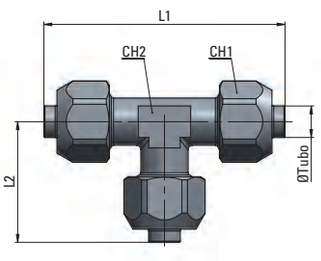
Gomito intermedio | Union elbow | Raccord à coude | Winkelverschraubung



Type	Ø Tubo	L1	CH1	CH2	g
28 06 06	**6-4**	23	12	10	24,9
28 08 08	**8-6**	23,5	14	10	26,9
28 10 10	**10-8**	26	16	12	33,3
new **28 12 12**	**12-10**	30	19	17	-

CX 29

T intermedio | Union tee | T égal | T-Verschraubung



Type	Ø Tubo	L1	L2	CH1	CH2	g
29 06 06	**6-4**	46	23	12	10	36,4
29 08 08	**8-6**	46	23	14	10	39
29 10 10	**10-8**	52	26	16	12	47,6
new **29 12 12**	**12-10**	60	30	19	17	-

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MO LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi a Ogiva in Ottone Nichelato
Brass Nickel-Plated Compression Fittings
Raccords à bague en laiton nickelé
Schneidringverschraubungen aus Messing vernickelt

I

I Raccordi ad Ogiva della serie MO garantiscono l'aggraffaggio del tubo e la tenuta pneumatica/idraulica del raccordo tramite la compressione sul tubo di un anello denominato "ogiva". Le sedi delle ogive, le ogive ed i dadi sono dimensionati seguendo le prescrizioni della normativa ISO8434/DIN 2353.
Tutti i raccordi della serie MO vengono sottoposti ad un trattamento superficiale di Nichelatura elettrolitica.

GB

The compression fittings of the MO line ensure the pneumatic/hydraulic tightness of the tubing by compression of an olive ring on the tubing. The olive seats, the olives and the nuts are all manufactured according to ISO8434/DIN 2353 norm.
All MO fittings are electrolytic nickel plated.

F

Les raccords à bague de la série MO garantissent le tenue pneumatique et hydraulique sur le tube par la compression de la bague sur le tube même. Le siège de la bague, la bague et l'écrou sont produits selon la norme ISO 8434/DIN2353
Tous les raccords de la série MO sont soumis à nickelage électrolytique.

D

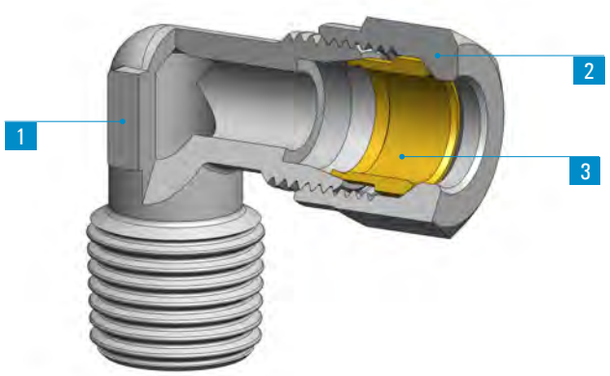
Die Schneidringverschraubungen der MO Baureihe garantieren die Schlauchhaltung und die hydraulische und pneumatische Dichtheit durch die Schneidringkomprimierung am Schlauch. Das Schneidringgehäuse, der Schneidring und die Überwurfmutter sind gemäß ISO8434/DIN 2353 hergestellt.
Alle MO Verschraubungen sind aus Messing, elektrolytisch vernickelt.

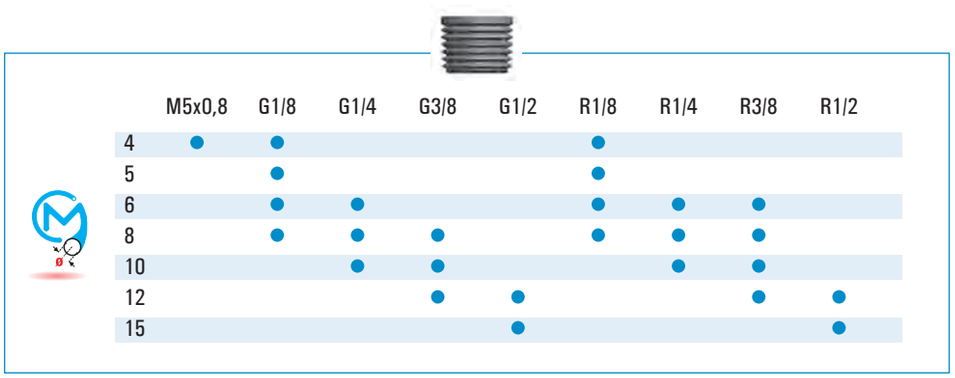
MO

1	2	3
Corpo Body Corps Körper	Dado Nut Écrou Überwurfmutter	Ogiva Olive Bague Schneidring
Ottone UNI EN 12164 CW614N - UNI EN 12165 CW617N Nichelato Brass UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickel Plated Laiton UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickelé Messing UNI EN 12164 CW614N - UNI EN 12165 CW617N vernickelt	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel Plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt	Ottone UNI EN 12164 CW614N Brass UNI EN 12164 CW614N Laiton UNI EN 12164 CW614N Messing UNI EN 12164 CW614N

-40°C ÷ 150°C

Max 60 bar





SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
Tubi in Rame, Alluminio e con l'impiego dell'apposito rinforzo interno (MO 23) sono utilizzabili tubi in PA11 e PA6.
Tolleranze accettabili sui tubi:
+/– 0,07 mm fino a Ø 10 mm
+/– 0,1 mm fino Ø 15 mm.

Campi di applicazione:
Impianti pneumatici, idraulici ed oleodinamici.

DATA SHEET

Recommended tubings:
Copper and alluminium tubings. PA11 and PA6 tubings are to be used with our MO 23 reinforcement part.
Acceptable Tolerances on the tubings:
+/– 0,07 mm up to Ø 10 mm
+/– 0,1 mm up to Ø 15 mm

Application fields:
Pneumatic, hydraulic and oleodynamic circuits.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
Tubes Cuivre et Aluminium. Le PA11 et PA6 seulement avec pièce de renforcement MO 23.
Tolerances sur les tubes:
+/– 0,07 mm jusqu'au Ø 10 mm
+/– 0,1 mm jusqu'au Ø 15 mm.

Domaines d'application:
Circuits pneumatiques, hydrauliques et oléodynamiques.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Kupfer und Aluminiumschläuche. PA11 und PA6 sollten aber mit dem Verstärkungshülse, MO 23 eingesetzt werden.
Schlauchtoleranzen:
+/– 0,07 mm bis Ø 10 mm
+/– 0,1 mm bis Ø 15 mm.

Anwendungsbereiche:
Hydraulische, öldynamische und pneumatische Anlagen.

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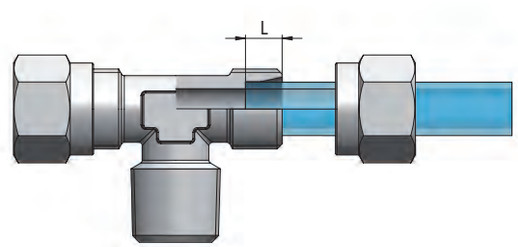
Profondità di inserimento del tubo | Tubing insertion depth | Profondeur d'insertion du tube | Schlaucheinstecktiefe



Øe Tube	L
4	4
5	5,5
6	5,5
8	5,5
10	7
12	7
15	7

ISTRUZIONI DI MONTAGGIO

1. Tagliare il tubo a 90° verificando l'assenza su questo di bave interne ed esterne;
2. Inserire il dado e l'ogiva sul tubo avendo l'accortezza di orientare l'ogiva con il tagliente verso l'estremità del tubo da collegare al raccordo;
3. Avvitare manualmente il dado fino ad avvertire una certa resistenza all'avvitamento;
4. Dopo aver verificato il corretto posizionamento del tubo, servendosi di una chiave, serrare il dado avvitandolo di circa 1 1/2 - 2 giri in base al tipo di raccordo;
5. Al solo scopo di verifica, svitare il dado e controllare che l'ogiva abbia fatto presa in modo uniforme sul tubo;
6. Riavvitare il dado forzandolo di 1/4 di giro per assicurare la tenuta del sistema.

Avvertenza: nel caso occorra collegare al raccordo tubi curvi, assicurarsi che la curvatura del tubo sia ad una distanza almeno pari al doppio dell'altezza del dado.

ASSEMBLY INSTRUCTIONS

1. Cut the tube square and make sure that no burr (internally and externally) is left;
2. Insert the tube through the nut and olive. The olive edge is to be placed towards the tube ending;
3. Finger tighten the nut until resistance;
4. Check the tube is well positionned, and tighten the nut with a spanner 1 1/2 - 2 more turns according to the fitting used;
5. Just for safety, screw-off the nut and check that the olive is evenely gripping on the tubing;
6. Screw-on the nut a further 1/4 of a turn to grant the system tightness.

Remark: Should curved tubings, need to be connected, pls make sure that the tube curving be at least at twice the nut height distance.

INSTRUCTIONS DE MONTAGE

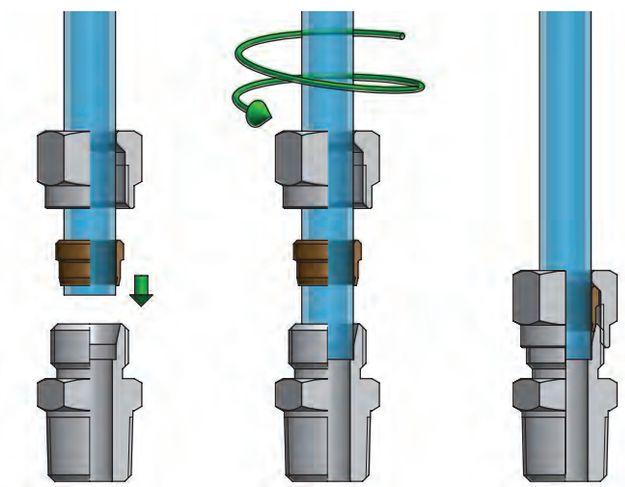
1. Couper le tube à 90° tout en vérifiant que aucune bavure intérieure ou extérieure se forme;
2. Monter l'écrou et la bague sur le tube en faisant attention que la bordure tranchante de la bague soit bien vers la fin du tube;
3. Visser à la main l'écrou jusqu'à on s'aperçoit d'une certaine resistance au vissage;
4. Après avoir vérifié que le tube est bien positionné, visser l'écrou (si necessaire par une clé) 1 1/2 - 2 tours sélon la taille du raccord;
5. Afin de vérifier, dévisser l'écrou et contrôler que la bague ait agrafé le tube uniformément;
6. Visser encore l'écrou 1/4 de tour pour assurer la tenue du système.

Remarque: Dans le cas où il faut brancher des tubes courbés, veuillez contrôler que la distance de la courbure du tube au raccord soit min. deux fois l'hauteur de l'écrou.

MONTAGEANWEISUNGEN

1. Schlauch bei 90° abschneiden und feststellen, dass es danach keinen Innen-oder-Aussengrat übrigbleibt;
2. Überwurfmutter und Schneidring auf den Schlauch montieren, und darauf achten, dass die Schneidringskanten sich am Ende des zur Montage notwendigen Schlauches befindet;
3. Die Überwurfmutter von Hand auf das Gewinde aufschrauben;
4. Nach Überprüfung, dass der Schlauch in guter Stellung ist, wenn notwendig, die Überwurfmutter mit einem Schlüssel für 1 1/2 - 2 Umdreheungen festschrauben;
5. Nur zur Überprufung, die Überwurfmutter lösen und feststellen, dass der Schneidring gleichförmig den Schlauch verklammert;
6. Zur Sicherstellung der Systemsdichtheit, die Überwurfmutter um eine weitere 1/4 Umdrehung festziehen.

Bemerkung: Beim Einsatz von gebogenen Schläuchen, bitte darauf achten, dass der Schlauchbogen von der Verschraubung zweimal der Überwurfmutterhöhe weit ist.



Effettuato il collegamento, assicurarsi che il tubo inserito nel raccordo non sia sottoposto ad alcuna forza di trazione; è necessario inoltre rispettare durante il collegamento del tubo il raggio minimo di curvatura consigliato così come riportato nella sezione tubi di questo catalogo tecnico (vedi pag. 363)
Per il serraggio delle parti filettate del raccordo si raccomanda di attenersi alle coppie consigliate riportate a pag.6

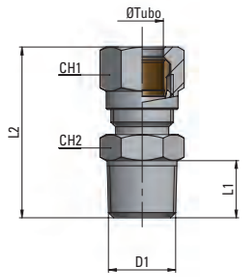
Once the tubing is connected to the fitting, make sure that the tubing is not subject to any tensile strength and that the min. recommended bending radius stated in the tubing section of this catalogue is complied with (see page 363).
To tighten threads, please check out our tightening torque chart illustrated at page 6.

Une fois effectué le branchement, s'assurer que le tube inséré dans le raccord n'est soumis à aucune force de traction. Egalement, il est nécessaire de respecter, lors du branchement du tube, le rayon minimum de courbure conseillé dans la section tubes de ce catalogue technique (voir la page 363).
Pour le serrage des parties filetées du raccord, il est recommandé de s'en tenir aux couples de serrage conseillés et reportés à la page 6.

Nach der Schlauchverbindung, sicherstellen, dass der in die Verschraubung eingeführte Schlauch keinen Zugbelastungen ausgesetzt ist; beim Anschluss des Schlauchs muss der empfohlene Mindestbiegeradius eingehalten werden, gemäß den in diesem technischen Katalog im Schlauchabschnitt, angegebenen Hinweisen (siehe Seite 363).
Zum Festziehen der Gewinde sich an den, auf Seite 6 empfohlenen Drehmomente einhalten.

MO 11

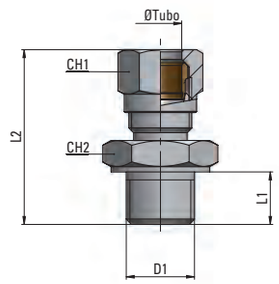
Diritto maschio conico | Taper straight, male | Union simple mâle conique | Gerade Einschraubverschraubung, kegelig



Type	Øe Tubo	D1	L1	L2	CH1	CH2	g
11 04 18	4	R1/8	8	27	10	10	12
11 05 18	5	R1/8	8	28	12	11	16,5
11 06 18	6	R1/8	8	28	12	12	16
11 06 14	6	R1/4	11	32,5	12	14	20,5
11 08 18	8	R1/8	8	29,5	14	12	19
11 08 14	8	R1/4	11	33	14	14	22,5
11 08 38	8	R3/8	11,5	33	14	17	40
11 10 14	10	R1/4	11	37,5	19	17	43,5
11 10 38	10	R3/8	11,5	38	19	17	56
11 12 38	12	R3/8	11,5	39	22	19	60
11 12 12	12	R1/2	14	41	22	22	77
11 15 12	15	R1/2	14	42,5	27	22	104

MO 12

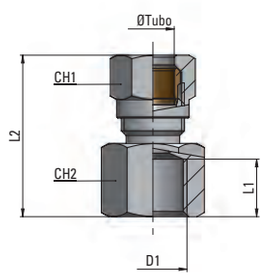
Diritto maschio cilindrico | Parallel straight, male | Union simple male cylindrique | Gerade Einschraubverschraubung, zylindrisch



Type	Ø Tubo	D1	L1	L2	CH1	CH2	g
12 04 M5	4	M5x0,8	5	26	10	9	9
12 04 18	4	G1/8	6	25	10	14	17
12 05 18	5	G1/8	8	29	12	14	20
12 06 18	6	G1/8	6	26	12	14	18
12 06 14	6	G1/4	8	29,5	12	17	21,6
12 08 18	8	G1/8	6	27,5	14	14	22
12 08 14	8	G1/4	8	30	14	17	33
12 10 14	10	G1/4	8	34,5	19	17	43,5
12 10 38	10	G3/8	9	36	19	19	62
12 12 38	12	G3/8	10	39	22	22	68
12 12 12	12	G1/2	12	42	22	27	98
12 15 12	15	G1/2	12	43	27	27	118

MO 13

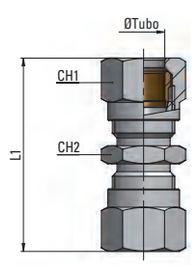
Diritto femmina | Female straight | Union simple femelle | Gerade Aufschraubverschraubung



Type	Ø Tubo	D1	L1	L2	CH1	CH2	g
13 04 18	4	G1/8	8	24,5	10	14	18
13 05 18	5	G1/8	10	29	12	14	22
13 06 18	6	G1/8	8	26	12	14	17,5
13 06 14	6	G1/4	11	30,5	12	17	25,5
13 08 18	8	G1/8	8	26,5	14	14	24
13 08 14	8	G1/4	11	31	14	17	28
13 10 14	10	G1/4	11	35,5	19	17	45,5
13 10 38	10	G3/8	11,5	36,5	19	20	66

MO 14

Giunzione intermedia | Union | Union simple égale | Gerade Verbindung



Type	Ø Tubo	L2	CH1	CH2	g
14 04 00	4	33,5	10	10	12
14 05 00	5	36	12	11	23
14 06 00	6	36,5	12	12	21
14 08 00	8	38,5	14	14	28
14 10 00	10	47,5	19	17	66
14 12 00	12	50,5	22	19	85
14 15 00	15	55,5	27	24	148

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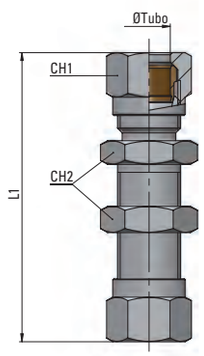
MO 15

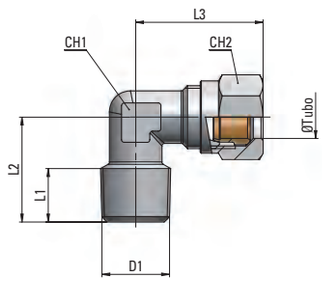
Giunzione intermedia passaparete | Bulkhead union | Union traversée de cloison | Gerade Schottverschraubung



Type	Ø Tubo	L1	CH1	CH2	g
15 04 00	4	57	10	12	27
15 05 00	5	52	12	14	41
15 06 00	6	51,5	12	14	39
15 08 00	8	55,5	14	16	55
15 10 00	10	62,5	19	19	104
15 12 00	12	64,5	22	22	136
15 15 00	15	69,5	27	25	183

MO 16

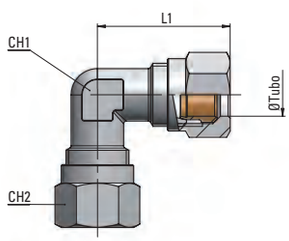
Gomito maschio conico | Taper elbow fitting, male | Raccord à coude mâle conique | Winkelverschraubung, kegelig



Type	Ø Tubo	D1	L1	L2	L3	CH1	CH2	g
16 04 18	4	R1/8	8	16	21	9	10	15
16 05 18	5	R1/8	8	17	23	9	12	17,5
16 06 18	6	R1/8	8	16	22	9	12	16
16 06 14	6	R1/4	11	20	24,5	11	12	24
16 08 18	8	R1/8	8	17	24	11	14	22
16 08 14	8	R1/4	11	20	24	11	14	25,5
16 10 14	10	R1/4	11	23,5	32	13	19	48
16 10 38	10	R3/8	11,5	24	32	13	19	52
16 12 38	12	R3/8	11,5	25,5	34,5	15	22	67
16 12 12	12	R1/2	14	28,5	34,5	15	22	78
16 15 12	15	R1/2	14	30	38	17	27	102

MO 17

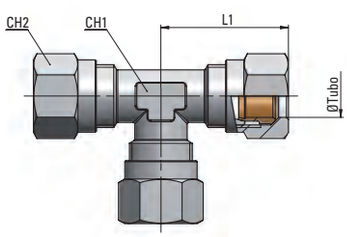
Gomito intermedio | Union elbow | Raccord à coude | Winkelverschraubung



Type	Ø Tubo	L1	CH1	CH2	g
17 04 00	4	21	9	10	19
17 05 00	5	23	9	12	22
17 06 00	6	23	9	12	22
17 08 00	8	24	11	14	32
17 10 00	10	32	13	19	76
17 12 00	12	34,5	15	22	98
17 15 00	15	38	17	27	145

MO 18

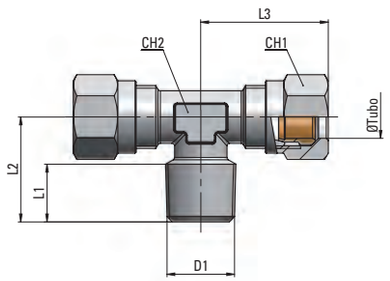
T intermedio | Union tee | T égal | T-Verschraubung



Type	Ø Tubo	L1	CH1	CH2	g
18 04 00	4	21	9	10	21
18 05 00	5	23	9	12	36
18 06 00	6	23	9	12	34
18 08 00	8	24	11	14	42
18 10 00	10	32	13	19	103
18 12 00	12	34,5	15	22	144
18 15 00	15	38	17	27	212

MO 19

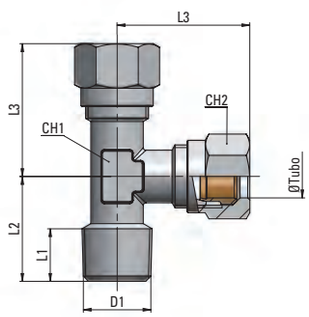
T centrale conico | Taper male tee | T mâle, central | T-Einschraubverschraubung



Type	Ø Tubo	D1	L1	L2	L3	CH1	CH2	g
19 04 18	4	R1/8	8	16	21	9	10	22
19 05 18	5	R1/8	8	16	23	9	12	28
19 06 18	6	R1/8	8	16	23	9	12	28
19 06 14	6	R1/4	11	20	24	11	12	29
19 08 18	8	R1/8	8	17	24	11	14	38
19 08 14	8	R1/4	11	20	24	11	14	40
19 10 14	10	R1/4	11	23,5	32	13	19	79,5
19 10 38	10	R3/8	11,5	24	32	13	19	92
19 12 38	12	R3/8	11,5	25,5	34,5	15	22	118
19 12 12	12	R1/2	14	28,5	34,5	15	22	128
19 15 12	15	R1/2	14	30	38	17	27	168

MO 20

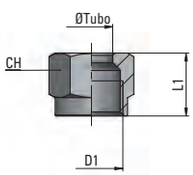
T laterale conico | Taper lateral tee | T mâle, latéral | L-Einschraubverschraubung



Type	Ø Tubo	D1	L1	L2	L3	CH1	CH2	g
20 04 18	4	R1/8	8	16	21	9	10	23
20 05 18	5	R1/8	8	16	23	9	12	30
20 06 18	6	R1/8	8	16	23	9	12	27
20 06 14	6	R1/4	11	20	24,5	11	12	29
20 08 18	8	R1/8	8	17	24	11	14	38
20 08 14	8	R1/4	11	20	24	11	14	42
20 10 14	10	R1/4	11	23,5	32	13	19	88
20 10 38	10	R3/8	11,5	24	32	13	19	94
20 12 38	12	R3/8	11,5	25,5	34,5	15	22	122
20 12 12	12	R1/2	14	28,5	34,5	15	22	132
20 15 12	15	R1/2	14	30	38	17	27	180

MO 21

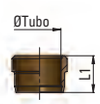
Dado | Nut | Écrou | Überwurfmutter



Type	Ø Tubo	D1	L1	CH	g
21 04 08	4	M8x1	11	10	4
21 05 10	5	M10x1	11,5	12	6
21 06 10	6	M10x1	11,5	12	5,5
21 08 12	8	M12x1	12	14	7
21 10 16	10	M16x1,5	15,5	19	19
21 12 18	12	M18x1,5	15,5	22	26
21 15 22	15	M22x1,5	17	27	43

MO 22

Ogiva | Olive | Bague | Schneidring



Type	Ø Tubo	L1	g
22 04 65	4	6	0,5
22 05 75	5	7,5	1
22 06 75	6	7	1
22 08 75	8	7	2
22 10 95	10	10	2
22 12 95	12	10	3
22 15 10	15	10	3

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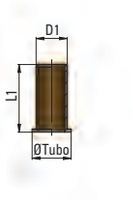
MO 23

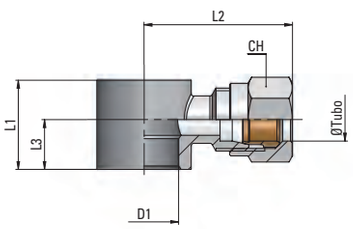
Anima di rinforzo | Inner reinforcement piece for tubings | Pièce renforçage intérieur pour tubes | Innere Verstärkungsstück für Schläuche



Type	Ø Tubo	D1	L1	g
23 06 12	**6**	4	12	0,5
23 08 14	**8**	6	13	1
23 10 16	**10**	8	14	2
23 12 18	**12**	10	16	3
23 15 20	**15**	12,5	17	4

MO 25

Anello singolo | Single banjo ring | Banjo simple | Ringstück



Type	Ø Tubo	D1	L1	L2	L3	CH	g
25 06 18	**6**	10	15	26	9	12	19
25 06 14	**6**	13,2	17	28	9,5	12	26
25 08 18	**8**	10	15	27	8,5	14	21
25 08 14	**8**	13,2	17	29	9,5	14	28

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OX LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi a Ogiva in Acciaio Inox 316L
316L Stainless Steel Compression Fittings
Raccords à bague en Acier Inox 316L
Schneidringverschraubungen aus Edelstahl 1.4404

NSF COMPONENT

I

I Raccordi ad Ogiva della serie OX sono realizzati completamente in Acciaio Inox AISI 316L (1.4404) e permettono la connessione di tubi in Acciaio.
La connessione con il tubo è semplice, non necessita l'utilizzo di grassi e ciò consente al raccordo di mantenere la caratteristica di prodotto food-grade.
Le sedi delle ogive, le ogive ed i dadi sono dimensionati seguendo le prescrizioni della normativa ISO8434/DIN 2353.

GB

The OX fittings are completely made in AISI 316L (1.4404) and they are suitable for assembly with stainless steel pipes. The pipe connection is easy and needs no grease, allowing thereby to keep the food grade degree of the product. The olive seat, the olives and the nuts are all manufactured according to ISO8434/DIN 2353 norm.

F

Les raccords à bague de la série OX sont fait entièrement en acier inox AISI 316 L (1.4404) et conçus pour le montage avec tuyaux en acier. Le montage avec le tuyau est très simple et surtout ne nécessite pas de graisse ainsi que le raccord maintient le degré de produit de qualité alimentaire. Le siège de la bague, la bague et l'écrou sont produits selon la norme ISO 8434/DIN2353.

D

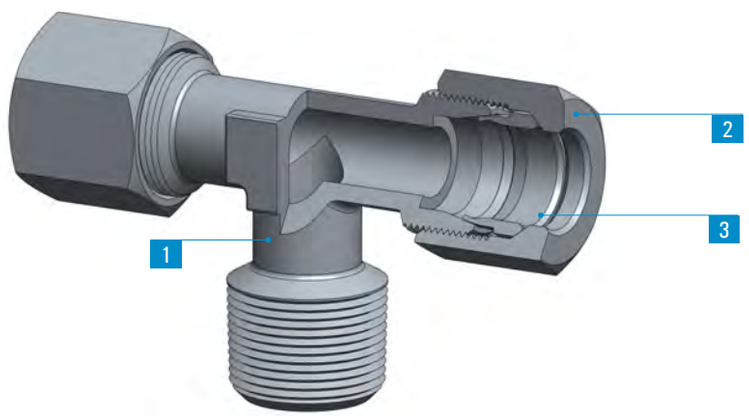
Die Schneidringverschraubungen der OX Baureihe sind aus Edelstahl 316L (1.4404) und ermöglichen die Verbindung mit Stahlrohren. Die Montage ist sehr einfach und erfordert keinen Fetteinsatz; damit behält die Verschraubung die Lebensmittelqualitätsstufe.
Das Schneidringgehäuse, der Schneidring und die Überwurfmutter werden gemäß der ISO8434/DIN 2353 hergestellt.

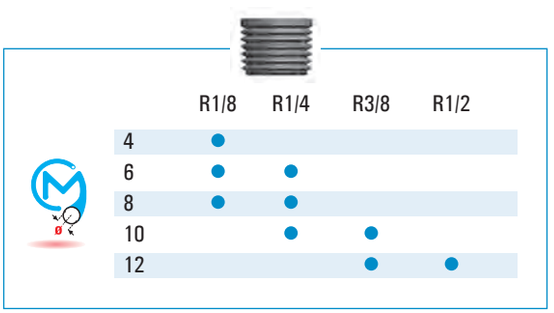
OX

1	2	3
Corpo Body Corps Körper	Dado Nut Écrou Überwurfmutter	Ogiva Olive Bague Schneidring
Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404	Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404	Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404

-40°C ÷ 250°C

Max 80 bar





	R1/8	R1/4	R3/8	R1/2
4	●			
6	●	●		
8	●	●		
10		●	●	
12			●	●

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
Tubi in Acciaio Inox senza saldatura secondo normativa DIN EN 10216-5
Tolleranze accettabili sui tubi:
Secondo normativa DIN EN 10216-5

Campi di applicazione:
Industria alimentare, farmaceutica e strumentazione.

DATA SHEET

Recommanded pipes:
Seemless Stainless steel pipes according to the DIN EN 10216-5 Norm
Acceptable hoses tolerances:
According to DIN EN 10216-5

Application fields:
Food and Pharma industry and instrumentation

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
Tubes sans soudures selon la norme DIN EN 10216-5
Tolérances permises:
Selon la norme DIN EN 10216-5

Domaines d'emploi:
Alimentaire, pharma et instrumentation

TECHNISCHE AUSKÜNFTE

Empfohlene Röhre:
Nahtlose Röhre gemäß DIN EN 10216-5
Angenommene Rohrtoleranzen:
Gemäß DIN EN 10216-5

Anwendungsbereiche:
Nahrungsmittel, Pharma und Messung

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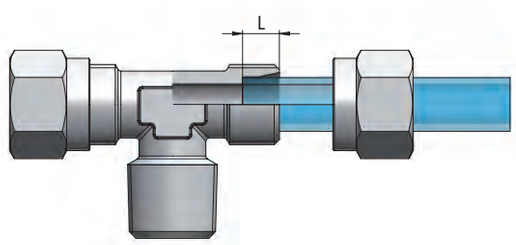
Profondità di inserimento del tubo | Tubing insertion depth | Profondeur d'insertion du tube | Schlaucheinstecktiefe



Øe Tube	L
4	4
6	5,5
8	5,5
10	7
12	7

PREPARAZIONE TUBO E AVVERTENZE

La lunghezza minima L del tubo montato tra 2 raccordi deve essere almeno 2.5÷3 volte l'altezza del dado utilizzato per il serraggio. Nel caso occorra collegare al raccordo tubi curvi, assicurarsi che la curvatura del tubo sia ad una distanza H almeno pari al doppio dell'altezza del dado.

Tubo

Le estremità dei tubi smontate vanno montate nello stesso raccordo usato per il serraggio.
Per il taglio dei tubi NON utilizzare un tube cutter ma un seghetto tradizionale che favorisce un taglio in squadra e limita la formazione di bave.

PIPE PREPARATION AND WARNINGS

The min. pipe length "L" between two fittings has to be at least 2.5-3 times the nut height.
To connect a curved pipe, make sure the pipe curve be at least at a distance "H" equaling twice the nut height.

Pipe

If disassembled, the pipe endings have to be re-assembled in the same fitting shoulder as previously used.
To cut the tube, DO NOT use a pipe cutter but a saw that allows for a square cut and limits burrs.

PREPARATION DU TUBE

La longueur min. " L" du tube assemblé entre deux raccords doit correspondre au moins à 2,5-3 fois l'hauteur de l'écrou. Pour connecter un tube coudé, vérifier que la courbure du tube soit à une distance "H" au moins égale à deux fois l'hauteur de l'écrou.

Tube

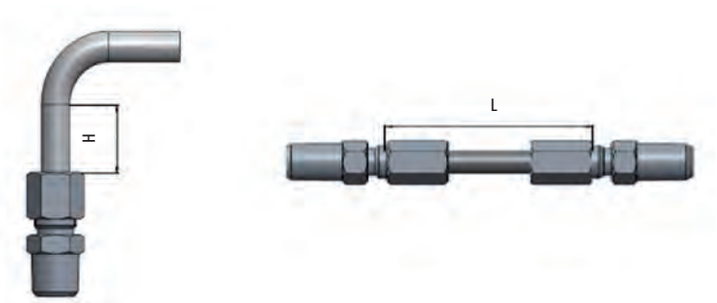
Une fois démonté, le tube devra être monté dans le même raccords employé avant.
Pour couper le tube, ne pas utiliser un coupe tube mais une scie traditionelle, qui permet une coupure à angle droit et limite les bavures.

ROHRVORBEREITUNG

Die Rohrlänge zwischen zwei Verschraubungen muss mindestens 2,5-3 Mal der Überwurfmutternhöhe entsprechen. Beim Einsatz von Winkelrohren, muss die Rohrkurve mindestens zweimal die Überwurfmutternhöhe entfernt sein (H).

Rohr

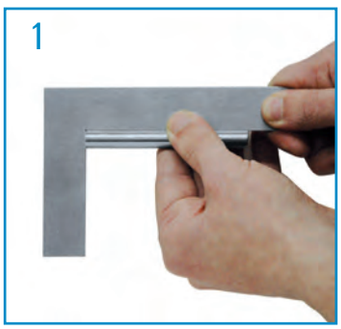
Wenn demontiert, muss die Rohrende in das gleiche Verschraubungsgehäuse wie zuvor, montiert werden.
Rohren dürfen mit keinem Rohrabschneider sondern mit einer traditionellen Säge abgesägt werden, die einen rechtwinkeligen Schnitt ermöglicht und eventuelle Gratbildung beschränkt.



Ø Tube	Ø 4	Ø 6	Ø 8	Ø 10	Ø 12
H min.	22	23	24	31	31
L min.	33	34	36	46	46

ISTRUZIONE DI MONTAGGIO

1. Tagliare il tubo ad angolo retto rispetto all'asse del tubo stesso. E' ammesso uno scostamento massimo di 0.5° rispetto all'asse del tubo.
2. Sbavare il tubo sul bordo interno ed esterno facendo attenzione a non rovinare il piano d'appoggio.
3. Infilare il dado e l'ogiva sul tubo facendo attenzione a montare l'ogiva con il dentino di aggraffaggio rivolto verso l'estremità del tubo da serrare.
4. Inserire il tubo nell'apposita sede del corpo portandolo fino alla battuta prevista, assicurandosi che il corpo, il dado e il tubo siano in asse tra loro.
5. Serrare manualmente il dado fino al totale avvitamento.



6. Con l'ausilio di una chiave effettuare il serraggio finale del dado sul tubo avvitandolo di circa ¾ -1 giro a seconda della dimensione del raccordo utilizzato, controllando che il tubo non giri insieme al dado. Si consiglia di utilizzare una chiave dinamometrica e far riferimento alle coppie di serraggio indicate in tabella.

DOPPIO CONTROLLO

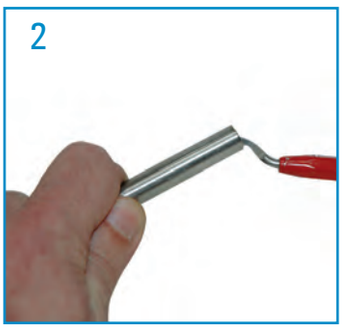
7. Al solo scopo di verifica svitare il dado e controllare che l'ogiva abbia inciso in modo uniforme il tubo.

MONTAGGIO FINALE

8. Riavvitare il dado di un 1/4 di giro oltre la chiusura indicata al punto 6.

ASSEMBLY INSTRUCTIONS

1. Cut the pipe square. A max 0.5° deviation to the pipe axis is allowed
2. Deburr the pipe internally and externally, making sure not to the pipe edge.
3. Slide the nut and the ferrule on the pipe. Make sure the ferrule cutting edge is facing the pipe ending.
4. Insert the pipe into the fitting against the shoulder. All components have to be in axis.
5. Tighten the nut manually all the way down.



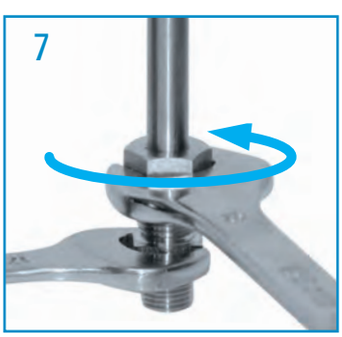
6. By means of a wrench, tighten the nut by ¾ -1 turn c upon the fitting size. Avoid any pipe rotation during this phase. For this purpose, it is recommended to use a torque wrench and to refer to the torque force stated in the chart above.

DOUBLECHECK

7. Loosen the nut and make sure that the ferrule has left an even groove on the pipe.

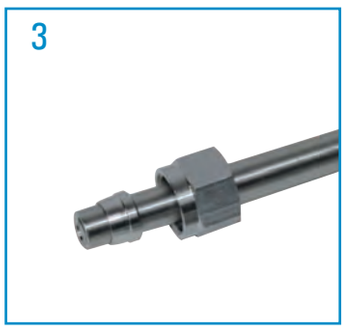
FINAL ASSEMBLY

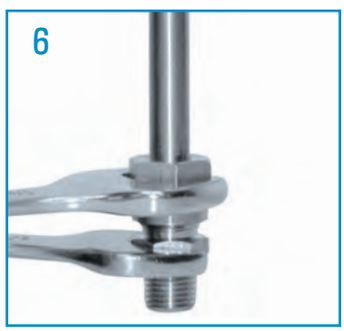
8. Tighten the nut by ¼ of a turn beyond the number of turns stated at point 6.



INSTRUCTIONS POUR L' INSTALLATION

1. Couper le tube à angle droit par rapport à l'axe du tube même. Un écart maxi de 0,5° est permis.
2. Ebavurer le tube à l'intérieur et à l' extérieur sans endommager le plan d'applui.
3. Glisser l'écrou et la bague sur le tube. Le coté coupante de la bague doit être positionnée vers l'extrémité du tube.
4. Insérer le tube dans le siège du raccords jusqu' au fond et s'assurer que le corps, l'écrou et le tube soient dans axe.
5. Visser à la main jusqu'au fond.





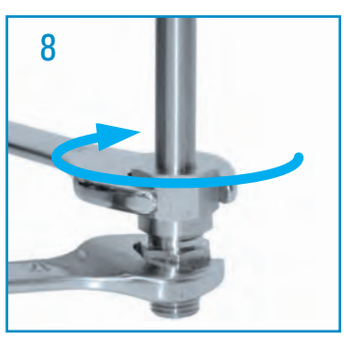
6. Serrer l' écrou +/- ¾-1 tours à l'aide d'une clef adéquate selon la taille du raccords et éviter la rotation du tube pendent le serrage. On conseille une clef dynamométrique et de se référer aux couples de serrage indiquées ci-dessus.

CONTRÔLE

7. Pour raison de sécurité, dévisser l'écrou et vérifier que la bague ait bien gravé d'une façon uniforme le tube.

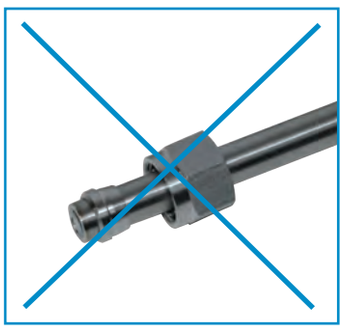
MONTAGE DEFINITIF

8. Visser l'écrou ¼ de tours au delà du point de serrage indiqué au point 6.



MONTAGEANWEISUNGEN

1. Das Rohr rechtwinkelig zum Achse absägen. Eine Maximal Abweichung von 0.5° zu dem Rohrachse ist genehmigt.
2. Rohr innen und außen entgraten ohne die Rohrfläche dabei zu beschädigen.
3. Überwurfmutter und Schneidring auf das Rohr schieben. Der Schneidringskant muss in der Richtung des Rohrendes sein.
4. Rohr in das Verschaubungsgehäuse bis zum Anschlag einstecken. Der Körper, der Schneidring und die Überwurfmutter müssen alle in Achse sein.
5. Überwurfmutter manuell festziehen.



Ø Tube	Nm
Ø 4	10
Ø 6	20
Ø 8	25
Ø 10	30
Ø 12	65

6. Mit einem Schlüssel, die Überwurfmutter um ¾-1 Umdrehungen je nach der Verschraubungsgrösse weiterziehen. Dafür wird ein dynamometrischer Schlüssel empfohlen und auf die oben genannt Drehmomente, Bezug nehmen. Die Rotation des Rohres muss dabei vermieden werden.

KONTROLLE

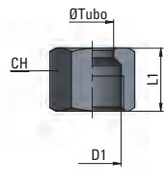
7. Aus Sicherheitsgründen, die Überwurfmutter wieder lösen und überprüfen, dass dieselbe eine uniforme Gravur rund um das Rohr hinterlassen hat.

ENDMONTAGE

8. Überwurfmutter um ¼ Umdrehungen über das, beim Punkt 6. angegebene Drehmoment, festziehen.

OX 10

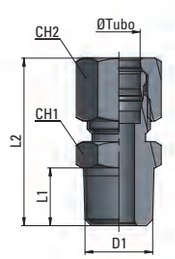
Dado | Nut | Écrou | Überwurfmutter



Type	Ø Tubo	D1	L1	CH	g
10 00 04	4	M8x1	11	10	4,3
10 00 06	6	M10x1	11,5	12	5,6
10 00 08	8	M12x1	12	14	7,1
10 00 10	10	M16x1,5	15,5	19	18,4
10 00 12	12	M18x1,5	15,5	22	25,8

OX 11

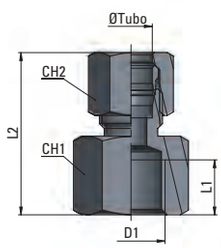
Diritto maschio conico | Taper straight, male | Union simple mâle conique | Gerade Einschraubverschraubung, kegelig



Type	Ø Tubo	D1	L1	L2	CH1	CH2	g
11 04 18	4	R1/8	8	27	10	10	12,9
11 06 18	6	R1/8	8	27	11	12	14,9
11 06 14	6	R1/4	11	31	14	12	24
11 08 18	8	R1/8	8	29	12	14	17,5
11 08 14	8	R1/4	11	32	14	14	25
11 10 14	10	R1/4	11	35,5	17	19	42,4
11 10 38	10	R3/8	11,5	37	17	19	51,2
11 12 38	12	R3/8	11,5	37	19	22	59,3
11 12 12	12	R1/2	14	40,5	22	22	81,1

OX 13

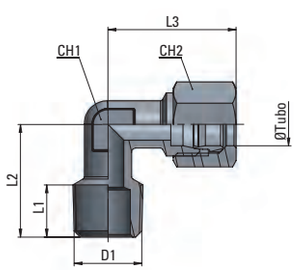
Diritto femmina | Female straight | Union simple femelle | Gerade Aufschraubverschraubung



Type	Ø Tubo	D1	L1	L2	CH1	CH2	g
13 06 18	6	G1/8	8,5	28	14	12	20,5
13 08 14	8	G1/4	10,5	31	19	14	35,1
13 10 14	10	G1/4	10,5	34,5	19	19	51,6
13 10 38	10	G3/8	10,5	36,5	22	19	-
13 12 38	12	G3/8	10,5	36,5	22	22	70,2
13 12 12	12	G1/2	12,5	37,5	24	22	69,2

OX 14

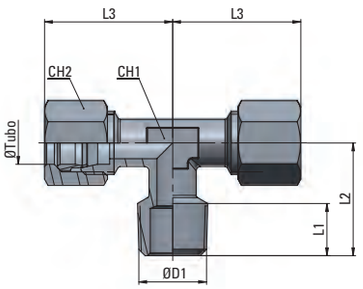
Gomito maschio conico | Taper elbow fitting, male | Raccord à coude mâle conique | Winkelverschraubung, kegelig



Type	Ø Tubo	D1	L1	L2	L3	CH1	CH2	g
14 04 18	4	R1/8	6,5	17	23	10	10	16,7
14 06 18	6	R1/8	6,5	17	24	10	12	19,2
14 06 14	6	R1/4	10	21,5	24	10	12	21,9
14 08 14	8	R1/4	10	21,5	24,5	10	14	23,1
14 10 14	10	R1/4	12,5	24,5	30,5	12	19	46,8
14 10 38	10	R3/8	11,5	24,5	30,5	12	19	49,8
14 12 38	12	R3/8	12,5	25,5	33	17	22	72,5
14 12 12	12	R1/2	13,5	30	35	19	22	91,2

OX 20

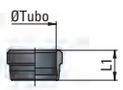
T centrale conico | Taper male tee | T mâle, central | T-Einschraubverschraubung



Type	Ø Tubo	D1	L1	L2	L3	CH1	CH2	g
20 04 18	4	R1/8	6,5	17	23	10	10	25,3
20 06 18	6	R1/8	6,5	17	24	10	12	29,6
20 06 14	6	R1/4	10	21,5	24	10	12	32,7
20 08 14	8	R1/4	10	21,5	24,5	10	14	35,1
20 10 14	10	R1/4	12,5	24,5	30,5	12	19	72,6
20 10 38	10	R3/8	11,5	24,5	30,5	12	19	76,9
20 12 38	12	R3/8	12,5	25,5	33	17	22	117,1
20 12 12	12	R1/2	13,5	30	33	19	22	126,2

OX 22

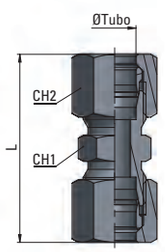
Ogiva | Olive | Bague | Schneidring



Type	Ø Tubo	L1	g
22 00 04	4	5,5	0,3
22 00 06	6	6	0,8
22 00 08	8	5,7	1
22 00 10	10	8	2,2
22 00 12	12	8	2,5

OX 26

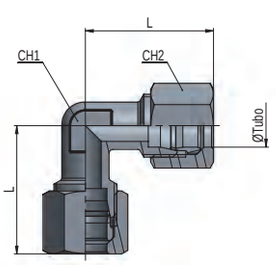
Giunzione intermedia | Union | Union simple égale | Gerade Verbindung



Type	Ø Tubo	D1	D2	L1	g
26 04 04	4	34	9	10	14,9
26 06 06	6	34	11	12	20,4
26 08 08	8	36	12	14	26,5
26 10 10	10	45	17	19	66,4
26 12 12	12	45	19	22	85,8

OX 28

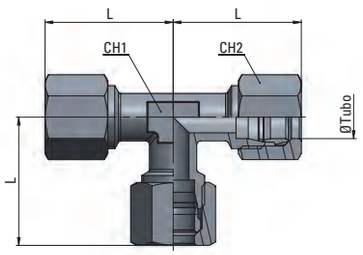
Gomito intermedio | Union elbow | Raccord à coude | Winkelverschraubung



Type	Ø Tubo	L1	CH1	CH2	g
28 04 04	4	23	10	10	21,5
28 06 06	6	24	10	12	25,3
28 08 08	8	24,5	10	14	28,3
28 10 10	10	30,5	12	19	66
28 12 12	12	33	17	22	99,2

OX 29

T intermedio | Union tee | T égal | T-Verschraubung



Type	Ø Tubo	L1	CH1	CH2	g
29 04 04	**4**	23	10	10	30,2
29 06 06	**6**	24	10	12	36,2
29 08 08	**8**	24,5	10	14	40,9
29 10 10	**10**	30,5	12	19	94,1
29 12 12	**12**	33	17	22	143

trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

RA LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi Standard in Ottone Nichelato
Brass Nickel-Plated Standard Fittings
Raccords Standard en laiton nickelé
Standardverschraubungen aus Messing vernickelt

I

La serie RA, comunemente considerata come una serie di "Accessori" o "Raccordi Standard", è costituita da Nippli, Riduzioni, Prolunghe, Tappi, Portagomma, Raccordi a L, Raccordi a T, Croci, ecc.
Vista la varietà di funzioni ausiliarie che coprono questi raccordi, risulta evidente il ruolo di completamento, che questa serie svolge nei confronti delle altre.
Tutti i raccordi RA vengono sottoposti a trattamento superficiale di Nichelatura.

GB

The RA line, also known as the "Accessories line" or the "Standard fittings line" consists of a wide variety of components, such as Nipples, Reduction pieces, Connections, Plugs, Hose connections, L-T and Cross fittings.
Due to the multiple auxiliary functions of this line, the RA fittings are the right complement for other ranges.
All components are brass nickel-plated.

F

La série RA, ou bien "La série des accessoires, ou Raccords Standard" se compose d'une grande variété de pièces pour tous raccordements et toutes configurations: mamelons, pièces de réduction, bouchons, douilles cannelées, raccords en Té, en L et Croix.
Compte tenu de la variété de ses fonctions complémentaires, la principale caractéristique de cette série devient celle de bien compléter les autres gammes.
Tous les raccords de cette série sont en laiton niquelé.

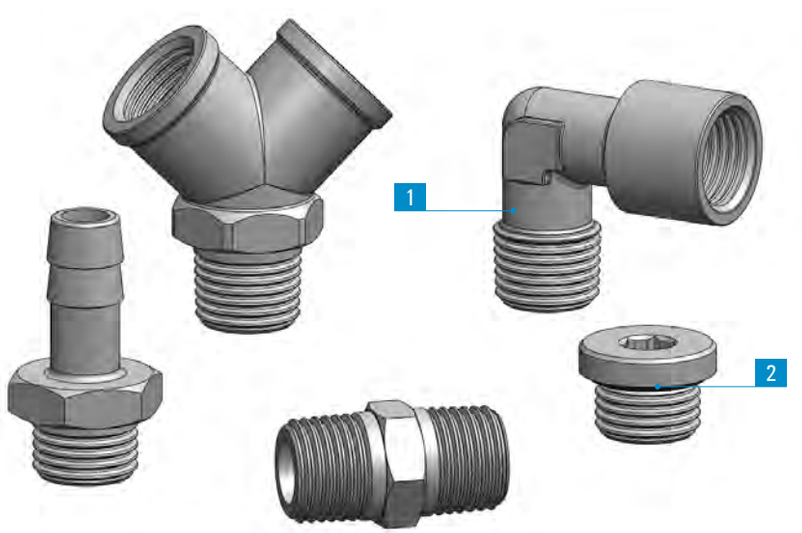
D

Die RA Baureihe, bekannt als die "Zubehörserie oder die Standardverschrabungsbaureihe" besteht aus Verschraubungen aller Bauformen und Grössen wie Nippel, Reduzierstück, Stopfen, Schlauchtüllen, T, L-Stueck, Winkel-und-Kreuzverschraubungen.
Es ist eine umfangreiche Nebenfunktionserie, die als Programmergänzung zu den anderen Baureihen betrachtet werden muss.
Alle Teile sind aus Messing vernickelt.

RA

1	2
Corpo del raccordo Fitting Body Corps du raccord Verschraubungskörper	Guarnizioni Seals Joint d'étanchéité Dichtung
Ottone UNI EN 12164 CW614N - UNI EN 12165 CW617N Nichelato Brass UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickel Plated Laiton UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickelé Messing UNI EN 12164 CW614N - UNI EN 12165 CW617N vernickelt	NBR NBR NBR NBR

-40°C ÷ 150°C Max 60 bar



M5x0,8	G1/8	G1/4	G3/8	G1/2	G3/4	G1"	R1/8	R1/4	R3/8	R1/2	R3/4	R1"
●	●	●	●	●	●	●	●	●	●	●	●	●

Campi di applicazione:
Impianti pneumatici, idraulici ed oleodinamici.

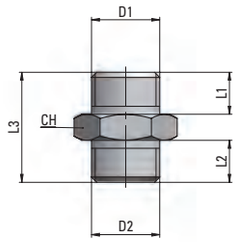
Application fields:
Pneumatic, hydraulic and oleodynamic circuits.

Domaines d'application:
Circuits pneumatiques, hydrauliques et oléodynamiques.

Anwendungsbereiche:
Hydraulische, öldynamische und pneumatische Anlagen.

RA 11

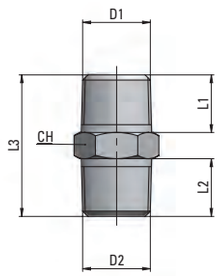
Nipplo cilindrico | Nipple, parallel | Mamelon cylindrique | Doppelnippel, zylindrisch



Type	D1	D2	L1	L2	L3	CH	g
11 M5 M5	M5x0,8	M5x0,8	5	5	13,5	8	2
11 M5 18	M5x0,8	G1/8	4	6	14,5	14	8
11 18 18	G1/8	G1/8	6	6	16,5	14	8
11 18 14	G1/8	G1/4	6	8	19	17	16,2
11 18 38	G1/8	G3/8	6	9	20	19	19
11 14 14	G1/4	G1/4	8	8	21	17	18,8
11 14 38	G1/4	G3/8	8	9	22	19	23,5
11 14 12	G1/4	G1/2	8	10	23,5	24	32
11 38 38	G3/8	G3/8	9	9	23	19	23
11 38 12	G3/8	G1/2	9	10	24,5	24	31,8
11 12 12	G1/2	G1/2	10	10	25,5	24	35

RA 12

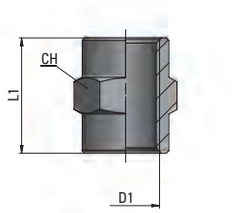
Nipplo conico | Nipple, taper | Mamelon conique | Doppelnippel, kegelig



Type	D1	D2	L1	L2	L3	CH	g
12 18 18	R1/8	R1/8	7,5	7,5	19,5	12	8
12 18 14	R1/8	R1/4	8	11	24	14	14,4
12 18 38	R1/8	R3/8	8	11,5	24,5	17	20
12 14 14	R1/4	R1/4	11	11	27	14	15,2
12 14 38	R1/4	R3/8	11	11,5	27,5	17	20,4
12 14 12	R1/4	R1/2	11	14	30,5	22	35,6
12 38 38	R3/8	R3/8	11,5	11,5	28	17	25,1
12 38 12	R3/8	R1/2	11,5	14	31	22	38,5
12 12 12	R1/2	R1/2	14	14	33,5	22	41,8
12 12 34	R1/2	R3/4	14	16,5	37	27	69
12 34 34	R3/4	R3/4	16,5	16,5	39,5	27	78,9
12 34 1	R3/4	R1"	16,5	19	42,5	34	112,4
12 1 1	R1"	R1"	19	19	45,5	34	127,5

RA 13

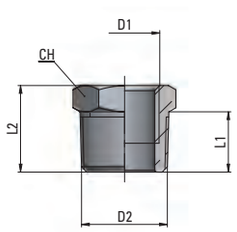
Manicotto | Joint piece | Manchon | Muffe



Type	D1	L1	CH	g
13 00 M5	M5x0,8	11	8	2
13 00 18	G1/8	15	14	9,8
13 00 14	G1/4	22	17	19,1
13 00 38	G3/8	23	22	34,5
13 00 12	G1/2	28	26	48,4
13 00 34	G3/4	32	32	98,4
13 00 1	G1"	35	38	97,8

RA 14

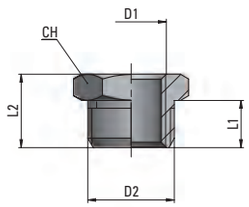
Riduzione F-M conica | Taper female-male reducing connector | Réduction femelle-mâle, conique | Reduzierstück, Auf-Einschraub, kegelig



Type	D1	D2	L1	L2	CH	g
14 18 14	G1/8	R1/4	11	16	14	10,2
14 18 38	G1/8	R3/8	11,5	16,5	17	20,2
14 18 12	G1/8	R1/2	14	19,5	22	34,8
14 14 38	G1/4	R3/8	11,5	16,5	17	15
14 14 12	G1/4	R1/2	14	19,5	22	31,5
14 38 12	G3/8	R1/2	14	19,5	22	24,1
14 38 34	G3/8	R3/4	16,5	23	27	70
14 12 34	G1/2	R3/4	16,5	23	27	44,6
14 12 1	G1/2	R1"	19	27	34	102,5
14 34 1	G3/4	R1"	19	27	34	74,2

RA 15

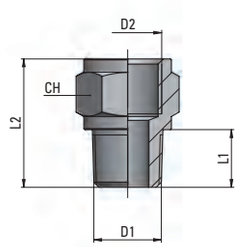
Riduzione F-M cilindrica | Parallel female-male reducing connector | Réduction femelle-mâle, cylindrique | Reduzierstück, Auf-Einschraub, zylindrisch



Type	D1	D2	L1	L2	CH	g
15 M5 18	M5x0,8	G1/8	6	10,5	14	8
15 18 14	G1/8	G1/4	8	13	17	10,5
15 18 38	G1/8	G3/8	9	14	19	19,3
15 18 12	G1/8	G1/2	10	15,5	24	30,7
15 14 38	G1/4	G3/8	9	14	19	12,8
15 14 12	G1/4	G1/2	10	15,5	24	28,5
15 38 12	G3/8	G1/2	10	15,5	24	22
15 38 34	G3/8	G3/4	11	17,5	30	-
15 12 34	G1/2	G3/4	11	17,5	30	36
15 34 1	G3/4	G1"	11,5	18,5	36	60,3

RA 16

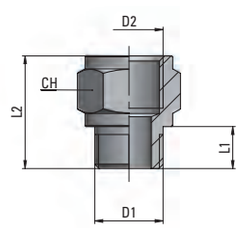
Prolunga M-F conica | Adaptor male-female, taper | Réduction mâle-femelle, conique | Reduziernippel, Ein-Aufschraub, kegelig



Type	D1	D2	L1	L2	CH	g
16 18 18	R1/8	G1/8	8	18	14	11,1
16 18 14	R1/8	G1/4	8	21,5	17	18
16 18 38	R1/8	G3/8	8	22,5	22	29,8
16 14 14	R1/4	G1/4	11	24,5	17	20,5
16 14 38	R1/4	G3/8	11	25,5	22	42
16 14 12	R1/4	G1/2	11	29	24	40
16 38 38	R3/8	G3/8	11,5	26	22	42
16 38 12	R3/8	G1/2	11,5	29,5	24	40
16 12 12	R1/2	G1/2	14	32	26	57

RA 17

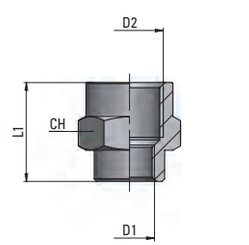
Prolunga M-F cilindrica | Adaptor male-female, parallel | Réduction mâle-femelle, cylindrique | Reduziernippel, Ein-Aufschraub, zylindrisch



Type	D1	D2	L1	L2	CH	g
17 M5 18	M5x0,8	G1/8	4	14,5	14	7
17 18 18	G1/8	G1/8	6	16,5	14	10,7
17 18 14	G1/8	G1/4	6	19,5	17	17
17 18 38	G1/8	G3/8	6	20,5	22	29,5
17 14 14	G1/4	G1/4	8	21,5	17	19
17 14 38	G1/4	G3/8	8	22,5	22	32
17 14 12	G1/4	G1/2	8	26	24	37
17 38 38	G3/8	G3/8	9	23,5	22	36
17 38 12	G3/8	G1/2	9	27	24	37
17 12 12	G1/2	G1/2	10	28	26	52,5

RA 18

Manicotto ridotto | Reduction joint piece | Manchon de réduction | Reduziermuffe



Type	D1	D2	L1	CH	g
18 M5 18	M5x0,8	G1/8	13,5	14	10
18 18 14	G1/8	G1/4	19	17	18
18 18 38	G1/8	G3/8	20	22	36
18 14 38	G1/4	G3/8	22,5	22	41
18 14 12	G1/4	G1/2	26	24	46
18 38 12	G3/8	G1/2	26	24	35,5
18 12 34	G1/2	G3/4	30	32	82,1

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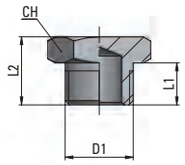
RA 19

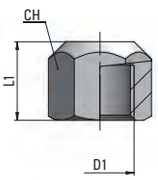
Tappo cilindrico | Parallel plug | Bouchon cylindrique | Verschlussstopfen, zylindrisch



Type	D1	L1	L2	CH	g
19 00 M5	M5x0,8	4	7	8	2
19 00 18	G1/8	6	10	14	7,5
19 00 14	G1/4	8	12,5	17	13,9
19 00 38	G3/8	9	13,5	19	18
19 00 12	G1/2	10	15,5	24	31
19 00 34	G3/4	11	16,5	30	48,9
19 00 1	G1	13	19	38	-

RA 20

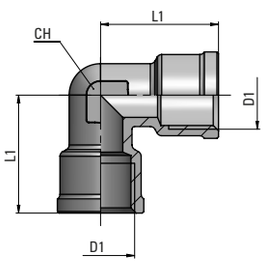
Tappo femmina | Female plug | Bouchon femelle | Verschlusskappe, Aufschraub



Type	D1	L1	CH	g
20 00 18	G1/8	10	14	9,6
20 00 14	G1/4	13,5	17	16,7
20 00 38	G3/8	14	20	21,3
20 00 12	G1/2	16,5	24	31,3
20 00 34	G3/4	18,5	30	52,2
20 00 1	G1"	20	38	98,7

RA 21

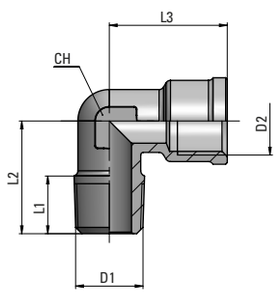
Gomito F-F | Female elbow | Equerre femelle | Aufschraub-Winkel



Type	D1	L1	CH	g
21 18 18	G1/8	18,5	10	15
21 14 14	G1/4	22,5	12	38
21 38 38	G3/8	25,5	15	44,2
21 12 12	G1/2	30	19	73,2

RA 22

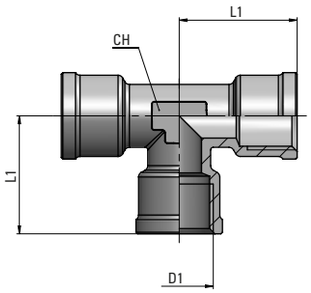
Gomito M-F | Male-female elbow | Equerre mâle-femelle | Auf-Einschraub-Winkel



Type	D1	D2	L1	L2	L3	CH	g
22 18 18	R1/8	G1/8	8,2	17	18,5	10	12,6
22 14 14	R1/4	G1/4	11	21,5	22,5	12	23,9
22 38 38	R3/8	G3/8	12	24,5	25,5	15	40,9
22 12 12	R1/2	G1/2	14	29,5	30	19	74,7
22 34 34	R3/4	G3/4	16	33	36,5	25	98,1
22 1 1	R1"	G1"	17	39	45	30	164

RA 23

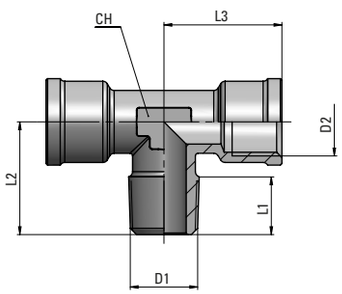
T F-F-F | Female tee | Té femelle | T Aufschraub



Type	D1	L1	CH	g
23 18 18	**G1/8**	18,5	10	21
23 14 14	**G1/4**	22,5	12	36,6
23 38 38	**G3/8**	25,5	15	61,3
23 12 12	**G1/2**	30	19	98,2

RA 24

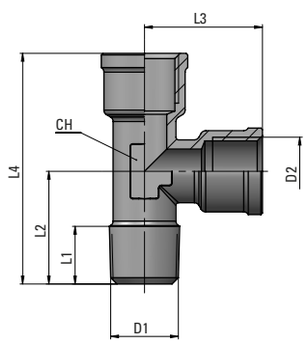
T F-M-F | Male-female stud tee | Té femelle-mâle-femelle | T Auf-Einschraub



Type	D1	D2	L1	L2	L3	CH	g
24 18 18	**R1/8**	**G1/8**	8,1	17	18,5	10	18,7
24 14 14	**R1/4**	**G1/4**	11	21,5	22,5	12	33,5
24 38 38	**R3/8**	**G3/8**	12	24,5	25,5	15	57,7
24 12 12	**R1/2**	**G1/2**	14	29,5	30	19	96,4
24 34 34	**R3/4**	**G3/4**	17	34,5	35,5	22	176,7
24 1 1	**R1"**	**G1"**	19	40,5	40,5	28	296,8

RA 25

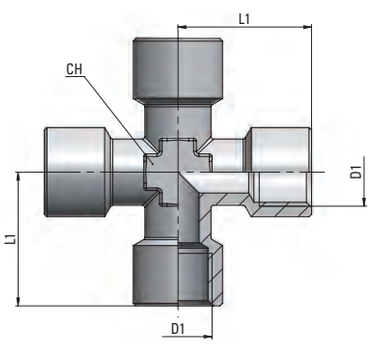
T M-F-F | Male-female, lateral tee | Té mâle-femelle-femelle | T Ein-Aufschraub



Type	D1	D2	L1	L2	L3	L4	CH	g
25 18 18	**R1/8**	**G1/8**	8.2	17	18,5	35,5	10	18,7
25 14 14	**R1/4**	**G1/4**	11	21,5	22,5	44	12	34
25 38 38	**R3/8**	**G3/8**	12	24,5	25,5	50	15	57,5
25 12 12	**R1/2**	**G1/2**	14	29,5	30	59,5	19	95,9

RA 26

Croce femmina | Female cross | Croix femelle | Aufschraub-Kreuzstück



Type	D1	L1	CH	g
26 18 18	**G1/8**	21	10	41
26 14 14	**G1/4**	25,5	13	73,9
26 38 38	**G3/8**	28	17	112

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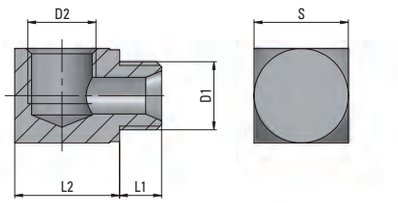
RA 27

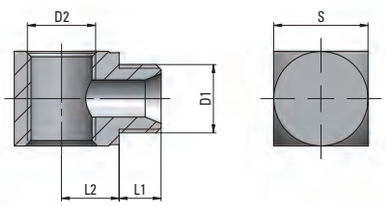
Gomito M-F | Male-female elbow | Equerre mâle-femelle | Auf-Einschraub-Winkel



Type	D1	D2	L1	L2	S	g ⚖
27 M5 M5	**M5x0,8**	**M5x0,8**	5	10	9	6
27 18 18	**G1/8**	**G1/8**	6	14	13	14
27 14 14	**G1/4**	**G1/4**	8	20	18	40

RA 28

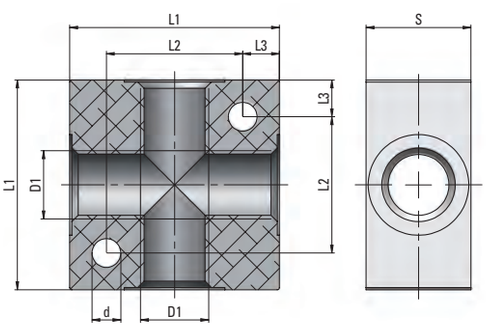
T F-M-F | Male-female stud tee | Té femelle-mâle-femelle | T Auf-Einschraub



Type	D1	D2	L1	L2	S	g ⚖
28 M5 M5	**M5x0,8**	**M5x0,8**	5	5,5	9	5
28 18 18	**G1/8**	**G1/8**	6	7,5	13	6
28 14 14	**G1/4**	**G1/4**	8	11	18	36

RA 29

Ripartitore 4 vie | Manifold, 4 ways | Distributeur, 4 Voies | Verteilblock, 4 Wege

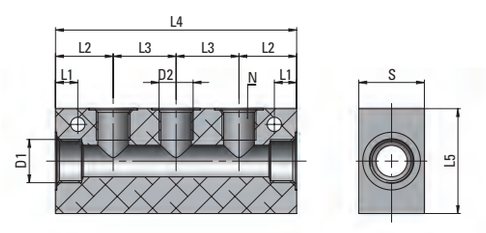


Type	D1	d	L1	L2	L3	S	g ⚖
29 00 M5	**M5x0,8**	3,2	20	14	3	10	9
29 00 18	**G1/8**	4,5	25	17	4	16	18
29 00 14	**G1/4**	5,5	40	26	7	20	64
29 00 38	**G3/8**	5,5	50	34	8	25	125
29 00 12	**G1/2**	5,5	50	34	8	30	130

Il corpo è in Alluminio Anodizzato - The body is in Anodised Aluminium - Corps est en aluminium anodisé - Der Körper besteht aus eloxiertem Aluminium

RA 29 S

Ripartitore singolo | Manifold, single | Distributer, simple | Verteilblock, einfach

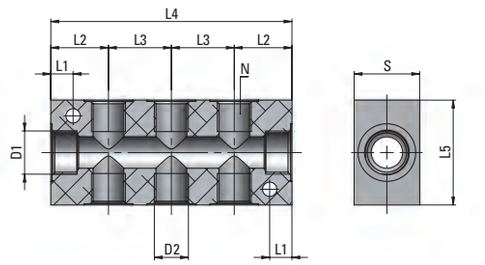


Type	D1	D2	N	L1	L2	L3	L4	L5	S	g ⚖
29 14 18 S3	**G1/4**	**G1/8**	**3**	4,5	18	18	72	30	20	91,7
29 14 18 S4	**G1/4**	**G1/8**	**4**	4,5	18	18	90	30	20	115,7
29 14 18 S5	**G1/4**	**G1/8**	**5**	4,5	18	18	108	30	20	140,5
29 38 14 S3	**G3/8**	**G1/4**	**3**	8,5	22	24	92	40	25	193,2
29 38 14 S4	**G3/8**	**G1/4**	**4**	8,5	22	24	116	40	25	244,3
29 38 14 S5	**G3/8**	**G1/4**	**5**	8,5	22	24	140	40	25	296,7

Corpo in Alluminio non Anodizzato - Body in non-anodized Aluminum - Corps en Aluminium non anodisé - Gehäuse aus nicht eloxiertem Aluminium

RA 29 D

Ripartitore doppio | Manifold, double | Distributeur, double | Verteilblock, zweifach

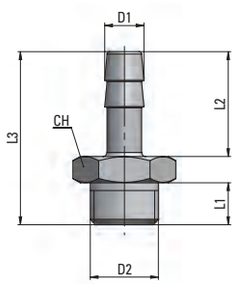


Type	D1	D2	N	L1	L2	L3	L4	L5	S	g ⚖
29 14 18 D3	G1/4	G1/8	3+3	4,5	18	18	72	30	20	85,7
29 14 18 D4	G1/4	G1/8	4+4	4,5	18	18	90	30	20	107,6
29 14 18 D5	G1/4	G1/8	5+5	4,5	18	18	108	30	20	129,1
29 38 14 D3	G3/8	G1/4	3+3	8,5	22	24	92	40	25	179,4
29 38 14 D4	G3/8	G1/4	4+4	8,5	22	24	116	40	25	226,1
29 38 14 D5	G3/8	G1/4	5+5	8,5	22	24	140	40	25	274,1

Corpo in Alluminio non Anodizzato - Body in non-anodized Aluminum - Corps en Aluminium non anodisé - Gehäuse aus nicht eloxiertem Aluminium

RA 30

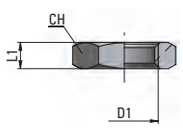
Portagomma | Hose connector | Douille cannelée | Schlauchtülle



Type	D1	D2	L1	L2	L3	CH	g ⚖
30 03 M5	3	M5x0,8	5	9	17	8	2
30 3,5 M5	3,5	M5x0,8	5	9	17	8	2
30 4,5 M5	4,5	M5x0,8	5	9	17	8	2,3
30 7,5 18	7,5	G1/8	6	20	30	14	9,9
30 7,5 14	7,5	G1/4	8	20	33	17	17
30 8,5 18	8,5	G1/8	6	20	30	14	11,5
30 8,5 14	8,5	G1/4	8	19	29,5	12	11,5
30 9,5 18	9,5	G1/8	6	20	30	14	11
30 9,5 14	9,5	G1/4	8	20	33	17	18
30 9,5 38	9,5	G3/8	9	20	34	19	22
30 12,5 14	12,5	G1/4	8	22	35	17	20,5
30 12,5 38	12,5	G3/8	9	22	36	19	22,9
30 12,5 12	12,5	G1/2	10	22	37,5	24	38
30 17,5 38	17,5	G3/8	9	24	38	19	30,2
30 17,5 12	17,5	G1/2	10	24	39	24	41,5

RA 31

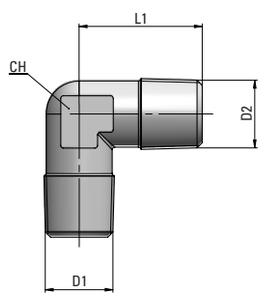
Dado | Nut | Ecrou | Überwurfmutter



Type	D1	L1	CH	g ⚖
31 00 18	G1/8	4,5	14	4
31 00 14	G1/4	5	17	5
31 00 38	G3/8	5,5	19	5
31 00 12	G1/2	6	24	8
31 00 M10x1	M10x1	4	14	3
31 00 M12x1	M12x1	5	16	5
31 00 M14x1	M14x1	5	18	5,5
31 00 M16x1	M16x1	5	20	6
31 00 M20x1,5	M20x1,5	4	27	10,5

RA 35

Gomito M-M | Male-male elbow | Equerre mâle | Einschraub-Winkelstück



Type	D1	D2	L1	CH	g ⚖
35 18 18	R1/8	R1/8	17	10	10,4
35 14 14	R1/4	R1/4	21,5	12	28,5
35 38 38	R3/8	R3/8	24,5	15	37,1
35 12 12	R1/2	R1/2	29,5	19	68,7
35 34 34	R3/4	R3/4	34,5	22	92,3
35 1 1	R1"	R1"	40,5	28	156

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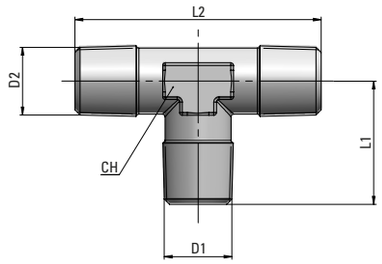
RA 36

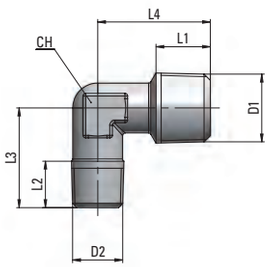
T M-M-M | Male tee | Té mâle | Einschraub-T-Stück



Type	Ø Tubo	D1	D2	L1	L2	g
36 18 18	**R1/8**	**R1/8**	**17**	34	10	14,3
36 14 14	**R1/4**	**R1/4**	**21,5**	43	12	28,7
36 38 38	**R3/8**	**R3/8**	**24,5**	49	15	50,6
36 12 12	**R1/2**	**R1/2**	**29,5**	59	19	93
36 34 34	**R3/4**	**R3/4**	**34,5**	69	22	138,6
36 1 1	**R1"**	**R1"**	**40,5**	81	28	239,3

RA 38

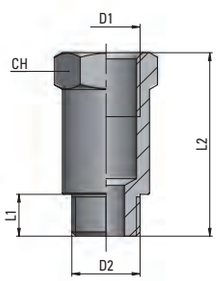
Riduzione a gomito M-M | Elbow reduction male-male | Réduction équerre, mâle-mâle | Einschraub-Reduzierstück



Type	D1	D2	L1	L2	L3	L4	CH	g
38 18 14	**R1/4**	**R1/8**	11	8	18,5	21,5	10	19

RA 39

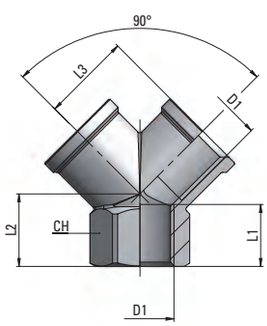
Prolunga M-F | Extention male-female | Prolongation mâle-femelle | Verlängerung M-F



Type	D1	D2	L1	L2	CH	g
39 18 22	**G1/8**	**G1/8**	6	22	14	14
39 18 42	**G1/8**	**G1/8**	6	42	14	28
39 14 35	**G1/4**	**G1/4**	8	35	17	32
39 14 51	**G1/4**	**G1/4**	8	51	17	46

RA 40

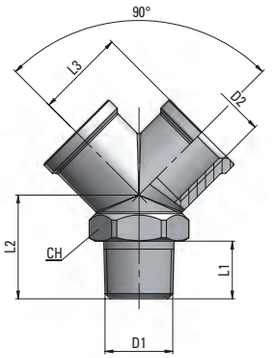
Y F-F-F | Female Y | Y avec filétage intérieur | Y mit Innengewinde



Type	D1	L1	L2	L3	CH	g
40 00 18	**G1/8**	8	12	14	13	18
40 00 14	**G1/4**	11	14	17	17	34
40 00 38	**G3/8**	11,5	16	19	20	45
40 00 12	**G1/2**	14	19	24,5	25	90

RA 41

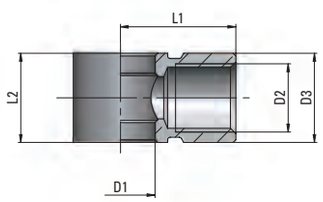
Y M-F-F | Male female Y | Y avec filétage intérieur/extérieur | Y mit Innen-Aussgewinde



Type	D1	D2	L1	L2	L3	CH	g
41 00 18	**R1/8**	**G1/8**	8	16	14	13	22
41 00 14	**R1/4**	**G1/4**	11	20	17	17	39
41 00 38	**R3/8**	**G3/8**	11,5	22	19	20	56
41 00 12	**R1/2**	**G1/2**	14	27	24,5	25	106

RA 42

Anello filettato | Single banjo ring | Bague orientable simple | Einfaches Schwenkringstück

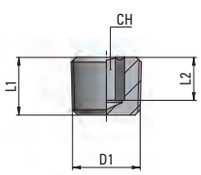


Type	D1	D2	D3	L1	L2	g
42 00 M5	5,1	M5x0,8	9	11,5	10	9
42 00 18	10	G1/8	14	16	15	15
42 00 14	13,2	G1/4	17	22	17	26
42 00 38	17	G3/8	20,5	26	20	38
42 00 12	21	G1/2	25	32	24	66
42 00 M5 /R	7	M5x0,8	9	11,5	10	6

/R = Solo per regolatori di flusso - For flow controls only - Seulement pour les réducteurs de débit - Nur für Drosselrückschlagventil

RA 43

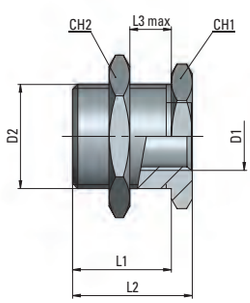
Tappo conico | Taper plug | Bouchon cônique | Verschlussstopfen, kegelig



Type	D1	L1	L2	CH	g
43 00 18	**R1/8**	**7,5**	4,8	5	3
43 00 14	**R1/4**	**11**	8	6	8
43 00 38	**R3/8**	**11,5**	7,6	8	14
43 00 12	**R1/2**	**14**	10,1	10	27
43 00 34	**R3/4**	**15,5**	10	14	45,5
43 00 1	**R1"**	**17,5**	11,5	17	84

RA 44

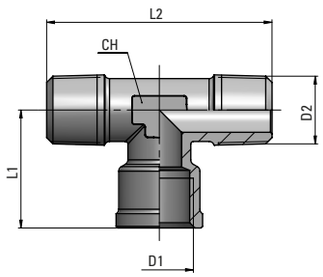
Passaparete filettato | Bulkhead connector | Traversée en cloison | Schottverschraubung



Type	D1	D2	L1	L2	L3	CH1	CH2	g
44 00 M5	**M5x0,5**	M10x1	10,5	14	6	14	14	12
44 00 18	**G1/8**	M16x1,5	14	18	8	19	22	28
44 00 14	**G1/4**	M20x1,5	20	24	13	24	27	54,8
44 00 38	**G3/8**	M26x1,5	21	26	13	30	32	91
44 00 12	**G1/2**	M28x1,5	27	33	19	32	36	113,5

RA 45

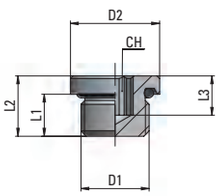
T M-F-M | Male-female-male tee | Té mâle-femelle-mâle | T, Ein-Aufschraub



Type	D1	D2	L1	L2	CH	g
45 18 18	**G1/8**	**R1/8**	18,5	34	10	16,6
45 14 14	**G1/4**	**R1/4**	22,5	43	12	31,3
45 38 38	**G3/8**	**R3/8**	25,5	49	15	64,5
45 12 12	**G1/2**	**R1/2**	30	59	19	95,4

RA 46

Tappo maschio con oring | Male plug with oring | Bouchon mâle avec oring | Einschraubstopfen mit Oring

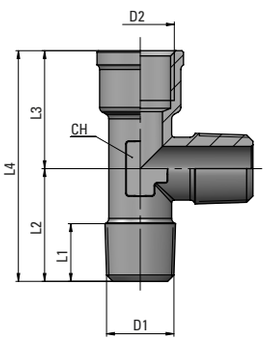


Type	D1	D2	L1	L2	L3	CH	g
46 00 18	**G1/8**	**14**	6,5	9,5	5,5	5	5,5
46 00 14	**G1/4**	**17**	8	11,5	6,5	6	11,5
46 00 38	**G3/8**	**20**	9	12,5	6	8	17,8
46 00 12	**G1/2**	**26**	10	14	7	10	33

Guarnizioni N BR - NBR Seals- Joint d'éta nchéitéNBR - NBR Dichtung

RA 47

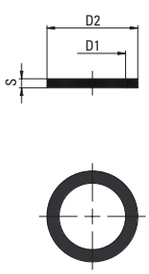
T M-F-M | Male-female-male tee | Té mâle-femelle-mâle | T, Ein-Aufschraub



Type	D1	D2	L1	L2	L3	L4	CH	g
47 18 18	**R1/8**	**G1/8**	8,2	17	18,5	35,5	10	16,7
47 14 14	**R1/4**	**G1/4**	11	21,5	22,5	44	12	31,2
47 38 38	**R3/8**	**G3/8**	12	24,5	25,5	50	15	53,8
47 12 12	**R1/2**	**G1/2**	14	29,5	30	59,5	19	94,7

RA 94

Rondella in plastica PA6 | PA6 sealing ring | Bague ètancheité en PA6 | PA6 Dichtring

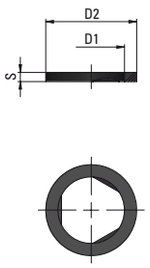


Type	D1	D2	S	g
94 00 M5	5	8	1,2	0,1
94 00 18	9,9	13,9	1,8	0,2
94 00 14	13,1	17,9	1,8	0,3
94 00 38	16,8	21,4	1,8	0,3
94 00 12	21	25,4	2	0,4

trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

RA 95

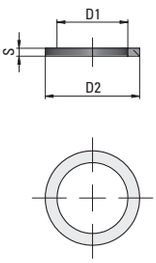
Rondella in plastica PA6, imperdibile | PA6 toothed sealing ring | Bague ètancheité en PA6, imperdable | PA6 Dichtring, unverlierbar



Type	D1	D2	S	g
95 00 M5	5	8	1,2	0,1
95 00 18	9,9	13,9	1,8	0,2
95 00 14	13,1	17,9	1,8	0,3
95 00 38	16,8	21,4	1,8	0,3
95 00 12	21	25,4	2	0,4

RA 96

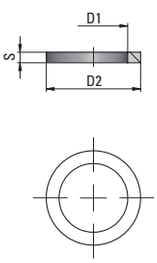
Rondella di tenuta in alluminio | Aluminium sealing washer | Bague étancheité en aluminium | Aluminiumdichtring



Type	D1	D2	S	g
96 00 M5	5	9	1	0
96 00 18	10,2	14	1,5	0,3
96 00 14	13,5	18	1,5	0,4
96 00 38	17	22	1,5	0,5
96 00 12	21,5	27	1,5	0,8

RA 97

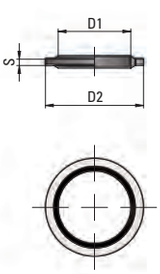
Rondella di tenuta in PTFE | PTFE sealing ring | Bague étancheité en PTFE | PTFE Dichtring



Type	D1	D2	S	g
97 00 18	10,1	14	2	0,3
97 00 14	13,1	18	2	0,4
97 00 38	16,8	21,4	1,8	0,6
97 00 12	21	25,5	2	0,8

RA 98

Rondella di tenuta acciaio/NBR | Bonded seal | Bagues BS | Stahldichtringe mit NBR Einlage



Type	D1	D2	S	g
98 00 18	10,4	14,7	1,2	0,6
98 00 14	13,85	18,7	1,2	0,8
98 00 38	17,35	22,7	1,2	1,1
98 00 12	21,65	26,7	1,2	1,2
98 00 34	27,3	32,6	1,2	1,5

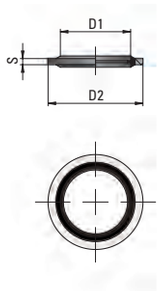
RA 99

Rondella di tenuta acciaio/NBR con autocentraggio

Bonded seal, self centring

Bagues BS avec auto centrage

Stahldichtringe mit NBR Einlage, selbstzentrierend



Type	D_1	D_2	S	g
99 00 M5	5,7	9	1	0,2
99 00 18	10,37	15,88	2	1,6
99 00 14	13,74	20,57	2	2,7
99 00 38	17,28	23,80	2	3
99 00 12	21,54	28,58	2,5	4,6
99 00 34	27,05	34,93	2,5	6,8

trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

PA LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi Standard in Ottone Nichelato NPT
Brass Nickel-Plated Standard Fittings, NPT
Raccords Standard en laiton nickelé, NPT
Standardverschraubungen aus Messing vernickelt, NPT

I

La serie PA, comunemente considerata come una serie di "Accessori" o "Raccordi Standard", è costituita da Nippli, Riduzioni, Prolunghe, Tappi, Portagomma, Raccordi a L, Raccordi a T, Croci, ecc.
Vista la varietà di funzioni ausiliarie che coprono questi raccordi, risulta evidente il ruolo di completamento, che questa serie svolge nei confronti delle altre.
Tutti i raccordi PA vengono sottoposti a trattamento superficiale di Nichelatura.

GB

The PA line, also known as the "Accessories line" or the "Standard fittings line" consists of a wide variety of components, such as Nipples, Reduction pieces, Connections, Plugs, Hose connections, L-T and Cross fittings.
Due to the multiple auxiliary functions of this line, the PA fittings are the right complement for other ranges.
All components are brass nickel-plated.

F

La série PA, ou bien "La série des accessoires, ou Raccords Standard" se compose d'une grande variété de pièces pour tous raccordements et toutes configurations: mamelons, pièces de réduction, bouchons, douilles cannelées, raccords en Té, en L et Croix.
Compte tenu de la variété de ses fonctions complémentaires, la principale caractéristique de cette série devient celle de bien compléter les autres gammes.
Tous les raccords de cette série sont en laiton niquelé.

D

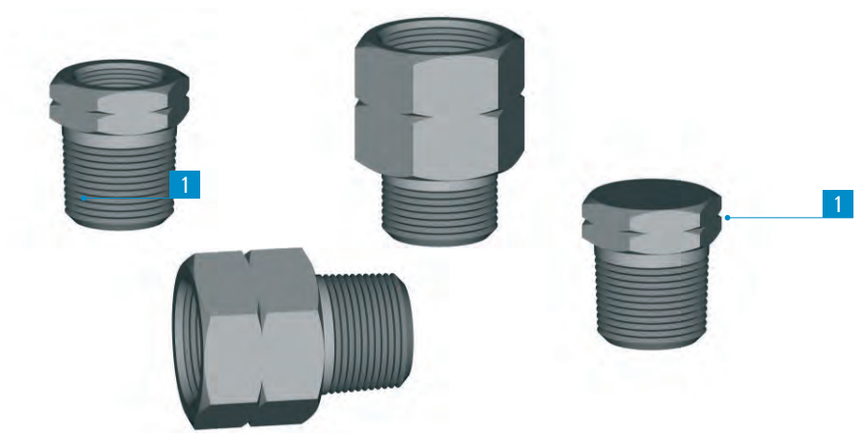
Die PA Baureihe, bekannt als die "Zubehörserie oder die Standardverschrabungsbaureihe" besteht aus Verschraubungen aller Bauformen und Grössen wie Nippel, Reduzierstück, Stopfen, Schlauchtüllen, T, L-Stueck, Winkel-und-Kreuzverschraubungen.
Es ist eine umfangreiche Nebenfunktionserie, die als Programmergänzung zu den anderen Baureihen betrachtet werden muss.
Alle Teile sind aus Messing vernickelt.

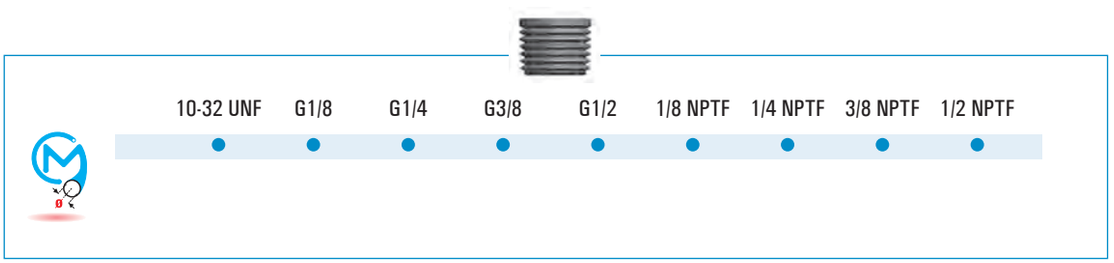
PA

1	
Corpo del raccordo Fitting Body Corps du raccord Verschraubungskörper	Ottone UNI EN 12164 CW614N - UNI EN 12165 CW617N Nichelato Brass UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickel Plated Laiton UNI EN 12164 CW614N - UNI EN 12165 CW617N Nickelé Messing UNI EN 12164 CW614N - UNI EN 12165 CW617N vernickelt

-40°C ÷ 150°C

Max 60 bar





Campi di applicazione:
Impianti pneumatici, idraulici ed oleodinamici.

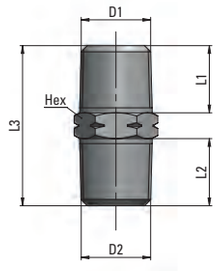
Application fields:
Pneumatic, hydraulic and oleodynamic circuits.

Domaines d'application:
Circuits pneumatiques, hydrauliques et oléodynamiques.

Anwendungsbereiche:
Hydraulische, öldynamische und pneumatische Anlagen.

PA 11

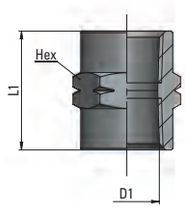
Nipplo Conico | Nipple, taper | Mamelon Conique | Doppelnippel, kegelig



Type	D1 NPTF	D2 NPTF	L1	L2	L3	HEX	g
11 1/8 1/8	**1/8**	**1/8**	8,5	8,5	21	12	-
11 1/4 1/4	**1/4**	**1/4**	13	13	31	14	-
11 3/8 3/8	**3/8**	**3/8**	13	13	32	18	-
11 1/2 1/2	**1/2**	**1/2**	17	17	41	22	-

PA 13

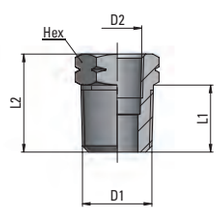
Manicotto | Joint Piece | Manchon | Muffe



Type	D1 NPTF	L1	HEX	g
13 1/8 1/8	**1/8**	18	14	-
13 1/4 1/4	**1/4**	23	18	-
13 3/8 3/8	**3/8**	25	22	-
13 1/2 1/2	**1/2**	32	26	-

PA 14

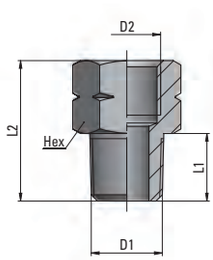
Riduzione F-M conica | Taper female-male reducing connector | Réduction femelle-mâle, conique | Reduzierstück, Auf-Einschraub, kegelig



Type	D1 NPTF	D2 NPTF	L1	L2	HEX	g
14 1/8 10-32	**1/8**	**10-32**	8,5	12,5	12	-
14 1/4 1/8	**1/4**	**1/8**	13	19	14	12,3
14 3/8 1/8	**3/8**	**1/8**	13	19	18	-
14 3/8 1/4	**3/8**	**1/4**	13	19	18	18
14 1/2 1/4	**1/2**	**1/4**	17	24	22	-
14 1/2 3/8	**1/2**	**3/8**	17	24	22	-

PA 16

Adattatore M-F conico | Adaptor male-female, taper | Adaptateur, mâle-femelle, conique | Adapter, Ein- Aufschraub, kegelig



Type	D1 NPTF	D2 BSP	L1	L2	HEX	g
16 1/0-32 M5	**10-32**	**Mx0,8**	5	12	8	12
16 1/8 1/8	**1/8**	**G1/8**	8,5	19	14	12
16 1/4 1/4	**1/4**	**G1/4**	13	27	18	26,1
16 3/8 3/8	**3/8**	**G3/8**	13	27	22	38,5
16 1/2 1/2	**1/2**	**G1/2**	17	34	27	65,5

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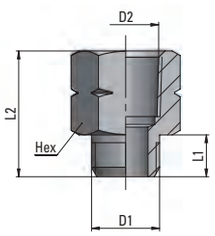
PA 17

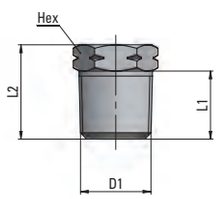
Adattatore M-F cilindrico | Adaptor male-female, parallel | Adaptateur, mâle-femelle, cylindrique | Adapter, Ein-Aufschraubu, zylindrisch



Type	D1 BSP	D2 NPTF	L1	L2	HEX	g
17 1/8 1/8	**G1/8**	**1/8**	6	18	14	12,5
17 1/4 1/4	**G1/4**	**1/4**	8	24	18	27
17 3/8 3/8	**G3/8**	**3/8**	9	25	22	49,5
17 1/2 1/2	**G1/2**	**1/2**	10	30	24	50

PA 19

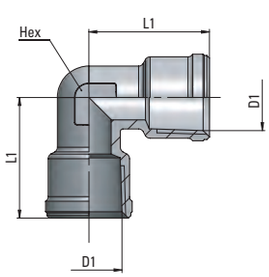
Tappo | Male plug | Bouchon | Verschlussstopfen



Type	D1 NPTF	L1	L2	HEX	g
19 00 1/8	**1/8**	8,5	12,5	12	6,5
19 00 1/4	**1/4**	13	18	14	14,5
19 00 3/8	**3/8**	13	19	18	24,5
19 00 1/2	**1/2**	17	24	22	41,5

PA 21

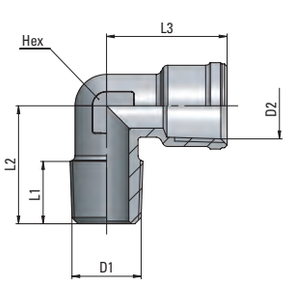
Gomito F-F | Female elbow | Equerre femelle | Aufschraub-Winkel



Type	D1 NPTF	L1	HEX	g
21 1/8 1/8	**1/8**	19	10	-
21 1/4 1/4	**1/4**	23	12	-
21 3/8 3/8	**3/8**	26	15	-
21 1/2 1/2	**1/2**	34	19	-

PA 22

Gomito M-F | Male-Female elbow | Equerre mâle-femelle | Auf-Einschraub-Winkel



Type	D1 NPTF	D2 NPTF	L1	L2	L3	HEX	g
22 1/8 1/8	**1/8**	**1/8**	8,5	17,5	19	10	38,5
22 1/4 1/4	**1/4**	**1/4**	12	22,5	23	12	35
22 3/8 3/8	**3/8**	**3/8**	12	25,5	26	15	-
22 1/2 1/2	**1/2**	**1/2**	16	31	34	19	-

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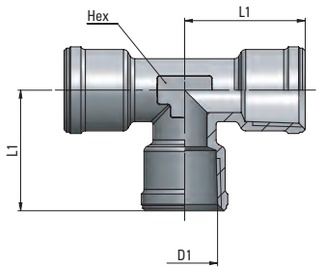
PA 23

T F-F-F | Female tee | Tè femelle | T-Aufschraub



Type	D1 NPTF	L1	HEX	g ⚖
23 1/8 1/8	**1/8**	19	10	-
23 1/4 1/4	**1/4**	23	12	-
23 3/8 3/8	**3/8**	31	17	-
23 1/2 1/2	**1/2**	33,5	21	143

RF LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi Standard per Applicazioni Food and Beverage
Standard Fittings for Food and Beverage Applications
Raccords Standard pour le domaine alimentaire et des boissons
Standardverschraubungen für Lebensmittel-und Getränkeanwendungen

NSF COMPONENT

I

RF è la famiglia di Raccordi Standard certificata per applicazioni Food and Beverage.
Completamente realizzato in ottone a basso contenuto di piombo, il raccordo della serie RF è certificato NSF secondo lo standard 169 per il contatto con acqua, the e caffè; risulta pertanto la soluzione ottimale per l'industria delle macchine del caffè e del vending.
Completa le certificazioni del raccordo serie RF anche la conformità secondo lo standard NSF/ANSI 372 che garantisce la rispondenza dell'ottone ai tenori di piombo massimi concessi per il contatto con acqua potabile (U.S.Safe Drinking Water Act).

GB

RF is a Standard Fittings line certified for Food and Beverage applications.
RF fitting is made of brass with low lead content and it is NSF certified according to the 169 standards for contact with water, tea and coffee. This makes RF fitting the right solution for the coffee and vending machines industry.
On top of the 169 NSF/ANSI Certificate, the RF fitting boasts also the NSF/ANSI 372 brass compliance with the maximum lead content standards allowed for contact with drinking water (U.S. Safe Drinking Water Act).

F

RF est la série des raccords standard certifiée pour les applications alimentaires et de boissons.
Entièrement en laiton à faible teneur en plomb, le raccord série RF est certifié NSF selon la norme 169 pour le contact avec l'eau, le thé et le café; c'est donc la solution optimale pour l'industrie du café et des distributeurs automatiques.
La certification des raccords de la série RF est également conforme à la norme NSF/ANSI 372 qui garantit la conformité du laiton aux niveaux maximum de plomb autorisés pour le contact avec l'eau potable (U.S.Safe Drinking Water Act).

D

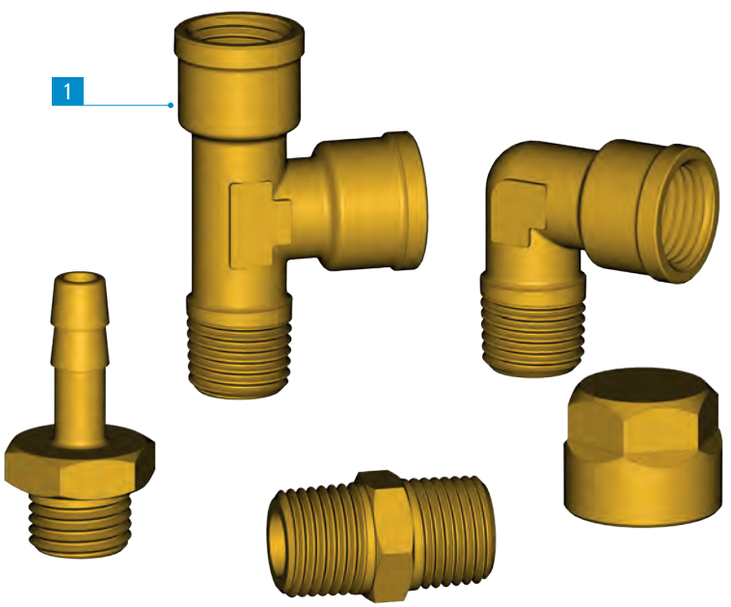
RF ist eine Standardverschraubung baureihe spezifisch entwickelt für Anwendungen im Bereich Nahrungsmittel und Getränke.
Die Verschraubung besteht aus Messing mit geringem Bleigehalt und ist nach NSF 169 Richtlinie für den Kontakt mit Wasser, Tee und Kaffee zertifiziert.
Diese Baureihe ist daher die perfekte Lösung für Kaffeemaschinenhersteller oder Getränkeautomaten.
Die NSF Zertifizierung wird auch mit der Konformität gemäß NSF/ANSI 372 Richtlinie ergänzt, die die Tauglichkeit von Messing und den maximal erlaubten Bleianteil für Trinkwasserkontakt garantiert (U.S Safe Drinking Water Act).

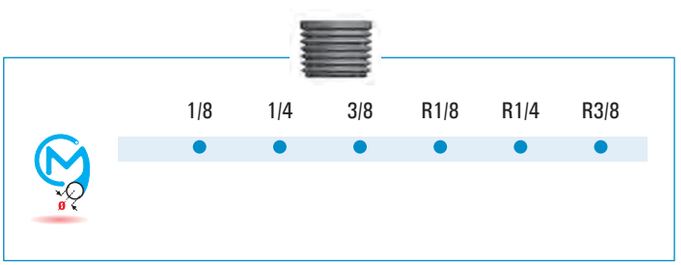
RF

	1
Corpo Body Corps Körper	
Ottone EN 12164 CW510L Conforme NSF/ANSI 372 Brass EN12164 CW510L Compliant NSF/ANSI 372 Laiton EN12164 CW510L, Conforme NSF/ANSI 372 Messing EN12164 CW510L, NSF/ANSI 372 konform	

-40°C ÷ 150°C

Max 60 bar





Campi di applicazione:
Applicazioni nel settore Food and Beverage.

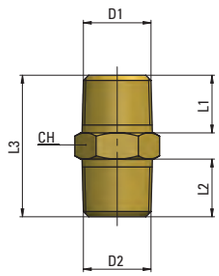
Application fields:
Food and Beverage Applications.

Domaines d'application:
Applications alimentaires et de boissons.

Anwendungsbereiche:
Anwendungen im Bereich Nahrungsmittel und Getränke.

RF 12

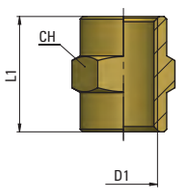
Nipplo conico | Nipple, taper | Mamelon conique | Doppelnippel, kegelig



Type	D1	D2	L1	L2	L3	CH	g
12 18 18	**R1/8**	**R1/8**	7,5	7,5	19,5	12	8,2
12 18 14	**R1/8**	**R1/4**	7,5	11	23,5	14	14,1
12 14 14	**R1/4**	**R1/4**	11	11	27	14	17,3
12 14 38	**R1/4**	**R3/8**	11	11,5	27,5	17	21,1
12 38 38	**R3/8**	**R3/8**	11,5	11,5	28	17	23,3

RF 13

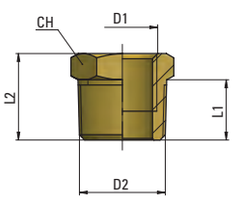
Manicotto | Joint piece | Manchon | Muffe



Type	D1	L1	CH	g
13 00 18	**G1/8**	15	14	10,4
13 00 14	**G1/4**	22	17	18,8
13 00 38	**G3/8**	23	20	21,4

RF 14

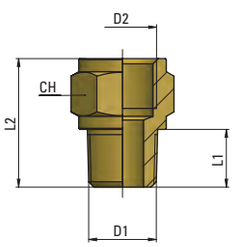
Riduzione F-M conica | Taper female-male reducing connector | Réduction femelle-mâle, conique | Reduzierstück, Auf-Einschraub, kegelig



Type	D1	D2	L1	L2	CH	g
14 18 14	**G1/8**	**R1/4**	11	16	14	10,5
14 18 38	**G1/8**	**R3/8**	11,5	16,5	17	20
14 14 38	**G1/4**	**R3/8**	11,5	16,5	17	12,8

RF 16

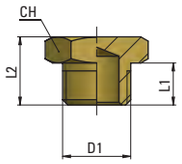
Prolunga M-F conica | Adaptor male-female, taper | Réduction mâle-femelle, conique | Reduziernippel, Ein-Aufschraub, kegelig



Type	D1	D2	L1	L2	CH	g
16 18 18	**R1/8**	**G1/8**	7,5	17,5	12	10,7
16 18 14	**R1/8**	**G1/4**	7,5	21	17	16,9
16 14 14	**R1/4**	**G1/4**	11	24,5	17	20,4
16 14 38	**R1/4**	**G3/8**	11	25,5	20	23,9
16 38 38	**R3/8**	**G3/8**	11,5	26	20	28,2

RF 19

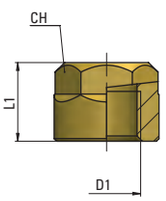
Tappo cilindrico | Parallel plug | Bouchon cylindrique | Verschlussstopfen, zylindrisch



Type	D1	L1	L2	CH	g
19 00 18	**G1/8**	6	10	14	7,3
19 00 14	**G1/4**	8	13	17	13,3
19 00 38	**G3/8**	9	14	20	19,8

RF 20

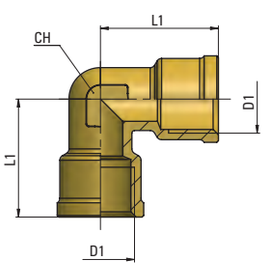
Tappo femmina | Female plug | Bouchon femelle | Verschlusskappe, Aufschraub



Type	D1	L1	CH	g
20 00 18	**G1/8**	10	14	6,5
20 00 14	**G1/4**	13,5	15	19,8
20 00 38	**G3/8**	14	19	17,6

RF 21

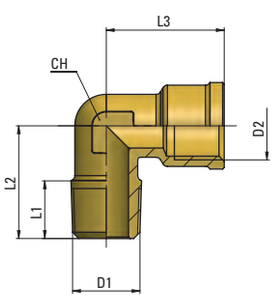
Gomito F-F | Female elbow | Equerre femelle | Winkel mit Innengewinde



Type	D1	L1	CH	g
21 18 18	**G1/8**	18,5	10	14,7
21 14 14	**G1/4**	22,5	12	24,9
21 38 38	**G3/8**	25,5	15	42,3

RF 22

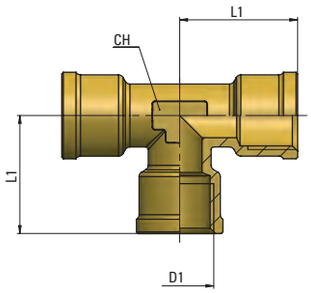
Gomito M-F | Male-female elbow | Equerre mâle-femelle | Einschraubwinkel mit Innen-und Außengewinde



Type	D1	D2	L1	L2	L3	CH	g
22 18 18	**R1/8**	**G1/8**	8,2	17	18,5	10	12,3
22 14 14	**R1/4**	**G1/4**	11	21,5	22,5	12	22,6
22 38 38	**R3/8**	**G3/8**	12	24,5	25,5	15	39,4

RF 23

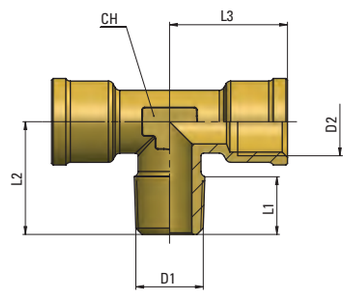
T F-F-F | Female tee | Té femelle | T-Stück mit Innengewinde



Type	D1	L1	CH	g
23 18 18	**G1/8**	18,5	10	21
23 14 14	**G1/4**	22,5	12	35,5
23 38 38	**G3/8**	25,5	15	59,8

RF 24

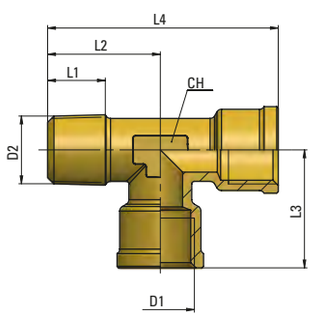
T F-M-F | Female-male-female tee | Té femelle-mâle-femelle | T-Stück (innen-außen-innen)



Type	D1	D2	L1	L2	L3	CH	g
24 18 18	**R1/8**	**G1/8**	8,2	17	18,5	10	18,9
24 14 14	**R1/4**	**G1/4**	11	21,5	22,5	12	33,1
24 38 38	**R3/8**	**G3/8**	12	24,5	25,5	15	57,2

RF 25

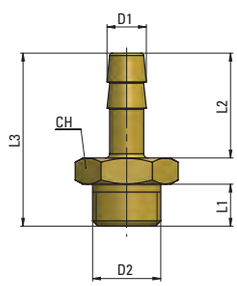
T M-F-F | Male-female- female tee | Té mâle-femelle-femelle | T-Stück (außen-innen-innen)



Type	D1	D2	L1	L2	L3	L4	CH	g
25 18 18	**G1/8**	**R1/8**	8,2	17	18,5	35,5	10	18,8
25 14 14	**G1/4**	**R1/4**	11	21,5	22,5	44	12	32,9
25 38 38	**G3/8**	**R3/8**	12	24,5	25,5	50	15	57,3

RF 30

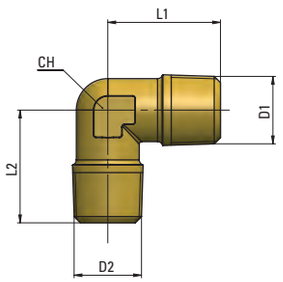
Portagomma | Hose connector | Douille cannelée | Schlauchtülle



Type	Øi Tubo	D1	D2	L1	L2	L3	CH	g
30 6,5 18	**6**	**6,5**	**G1/8**	6	20	30	14	9,7
30 6,5 14	**6**	**6,5**	**G1/4**	8	20	33	17	15,8

RF 35

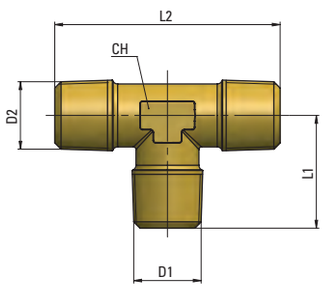
Gomito M-M | Male-male elbow | Equerre mâle | Winkel mit Außengewinde



Type	D1	D2	L1	L2	CH	g
35 18 18	**R1/8**	**R1/8**	17	17	10	10,3
35 18 14	**R1/8**	**R1/4**	19	21,5	12	19,6
35 14 14	**R1/4**	**R1/4**	21,5	21,5	12	20,6
35 14 38	**R1/4**	**R3/8**	23	24,5	15	34
35 38 38	**R3/8**	**R3/8**	24,5	24,5	15	36

RF 36

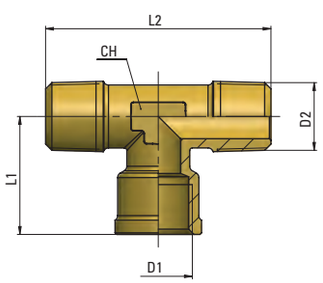
T M-M-M | Male tee | Té mâle | T-Stück mit Außengewinde



Type	D1	D2	L1	L2	CH	g
26 18 18	**R1/8**	**R1/8**	17	34	10	14,4
26 14 14	**R1/4**	**R1/4**	21,5	43	12	28,5
26 38 38	**R3/8**	**R3/8**	24,5	49	15	50,2

RF 45

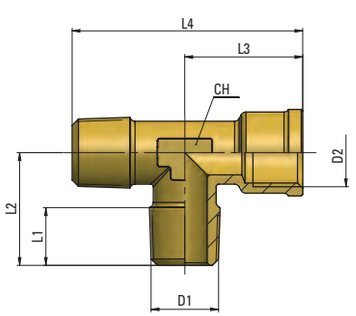
T M-F-M | Male-female-male tee | Té mâle-femelle-mâle | T-Stück (außen-innen-außen)



Type	D1	D2	L1	L2	CH	g
45 18 18	**G1/8**	**R1/8**	18,5	34	10	16,7
45 14 14	**G1/4**	**R1/4**	22,5	43	12	30,8
45 38 38	**G3/8**	**R3/8**	25,5	49	15	53,3

RF 47

T M-M-F | Male-male-female tee | Té mâle- mâle-femelle | T-Stück (außen-außen-innen)



Type	D1	D2	L1	L2	L3	L4	CH	g
47 18 18	**R1/8**	**G1/8**	8,2	17	18,5	35,5	10	16,6
47 14 14	**R1/4**	**G1/4**	11	21,5	22,5	44	12	30,5
47 38 38	**R3/8**	**G3/8**	12	24,5	25,5	50	15	53,4

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RX LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi Standard in Acciaio Inox 316L
316L Stainless Steel Standard Fittings
Raccords Standard en Acier Inox 316L
Standardverschraubungen aus Edelstahl 1.4404

NSF COMPONENT

I

La serie RX è costituita da raccordi standard in acciaio inox AISI 316L ed è il complemento delle serie di raccordi ad innesto rapido, a calzamento e dei raccordi a funzione in acciaio inossidabile.

GB

RX are our standard fittings in stainless steel AISI 316L; the right complement to our AISI 316L Fittings programm.

F

RX sont nos raccords standards en acier AISI 316L; le juste complément à notre gamme de raccords complètement en INOX 316L.

D

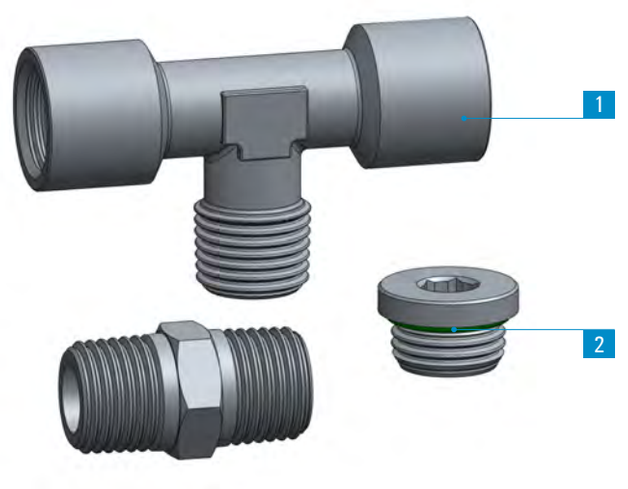
RX kennzeichnet unsere Zubehöreserie aus Edelstahl AISI 316L; die Ergänzung zu unserem AISI 316L Verschraubungsprogramm.

RX

1	2
Corpo Body Corps Körper	Guarnizioni Seals Joint d'étancheité Dichtung
Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404)	FPM conforme FDA FPM Compliant With FPM comforme à FDA FPM, FDA Konform

-40°C ÷ 200°C

Max 150 bar



M5x0,8	G1/8	G1/4	G3/8	G1/2	R1/8	R1/4	R3/8	R1/2
●	●	●	●	●	●	●	●	●

Campi di applicazione:
Pneumatica, Industria Alimentare, Chimica e Medicale-Farmaceutica.

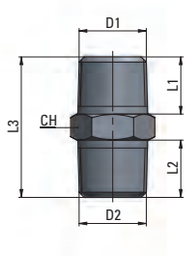
Application fields:
Pneumatics, Food Industry, Chemical, Medical and Pharmaceutical Industry.

Domaines d'application:
Pneumatique, Industrie alimentaire, Chimique, Médicale et Pharmaceutique.

Anwendungsbereiche:
Pneumatik, Nahrungsindustrie, chemische, medikale und pharmazeutische Industrie.

RX 12

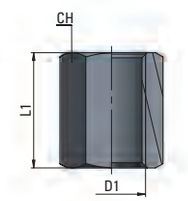
Nipplo conico | Nipple, taper | Mamelon conique | Doppelnippel, kegelig



Type	D1	D2	L1	L2	L3	CH	g
12 18 18	R1/8	R1/8	7,5	7,5	20	12	8,1
12 18 14	R1/8	R1/4	7,5	11	23,5	14	12,5
12 14 14	R1/4	R1/4	11	11	27	14	14,8
12 14 38	R1/4	R3/8	11	11,5	27,5	17	20,9
12 14 12	R1/4	R1/2	11	14	31	22	33
12 38 38	R3/8	R3/8	11,5	11,5	28	17	24,3
12 38 12	R3/8	R1/2	11,5	14	31,5	22	38,5
12 12 12	R1/2	R1/2	14	14	34	22	38,9

RX 13

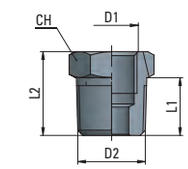
Manicotto | Joint piece | Manchon | Muffe



Type	D1	L1	CH	g
13 00 18	G1/8	15	14	11,8
13 00 14	G1/4	22	17	21,6
13 00 38	G3/8	24	22	40,5
13 00 12	G1/2	30	27	73,8

RX 14

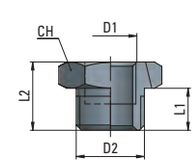
Riduzione F-M conica | Taper female-male reducing connector | Réduction femelle-mâle, conique | Reduzierstück, Auf-Einschraub, kegelig



Type	D1	D2	L1	L2	CH	g
14 18 14	G1/8	R1/4	11	16	14	8,8
14 18 38	G1/8	R3/8	11,5	16,5	17	18,6
14 18 12	G1/8	R1/2	14	19,5	22	32
14 14 38	G1/4	R3/8	11,5	16,5	17	11,9
14 14 12	G1/4	R1/2	14	20	22	34,6
14 38 12	G3/8	R1/2	14	20	22	22,7

RX 15

Riduzione F-M cilindrica | Parallel female-male reducing connector | Réduction femelle-mâle, cylindrique | Reduzierstück, Auf-Einschraub, zylindrisch



Type	D1	D2	L1	L2	CH	g
15 M5 18	M5x0,8	G1/8	6	10,5	14	7,8
15 18 14	G1/8	G1/4	8	13	17	10,5
15 14 38	G1/4	G3/8	9	14	19	12,7

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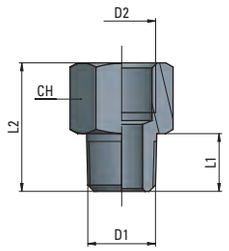
RX 16

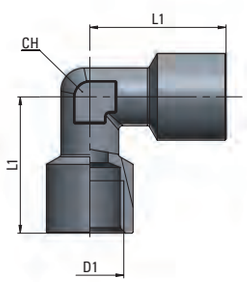
Prolunga M-F conica | Adaptor male-female, taper | Réduction mâle-femelle, conique | Reduziernippel, Ein-Aufschraub, kegelig



Type	D1	D2	L1	L2	CH	g
new 16 18 14	R1/8	G1/4	7,5	21	17	17,1
new 16 14 14	R1/4	G1/4	11	24,5	17	-
new 16 14 38	R1/4	G3/8	11	26	22	-
new 16 14 12	R1/4	G1/2	11	28,5	24	-
new 16 38 38	R3/8	G3/8	11,5	26,5	22	-
new 16 38 12	R3/8	G1/2	11,5	28,5	24	36,4
new 16 12 12	R1/2	G1/2	14	33,5	24	-

RX 21

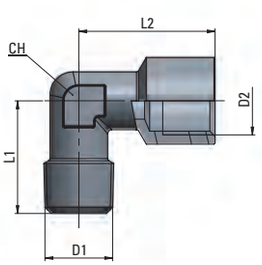
Gomito F-F | Female elbow | Equerre femelle | Aufschraub-Winkel



Type	D1	L1	CH	g
21 18 18	G1/8	22	10	19
21 14 14	G1/4	26	12	37,4
21 38 38	G3/8	28	17	44
21 12 12	G1/2	34	19	75,6

RX 22

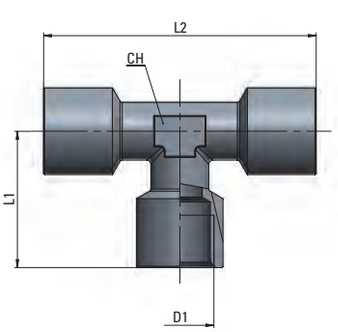
Gomito M-F | Male-female elbow | Equerre mâle-femelle | Auf-Einschraub-Winkel



Type	D1	D2	L1	L2	CH	g
22 18 18	R1/8	G1/8	17	22	10	16,3
22 14 14	R1/4	G1/4	21,5	26	12	24,2
22 38 38	R3/8	G3/8	24,5	28	17	40,9
22 12 12	R1/2	G1/2	30,5	34	19	75,5

RX 23

T F-F-F | Female T | Té femelle | T-Aufschraub



Type	D1	L1	L2	CH	g
23 18 18	G1/8	22	44	10	27,5
23 14 14	G1/4	26	52	12	41
23 38 38	G3/8	28	56	17	60
23 12 12	G1/2	34	68	19	121,5

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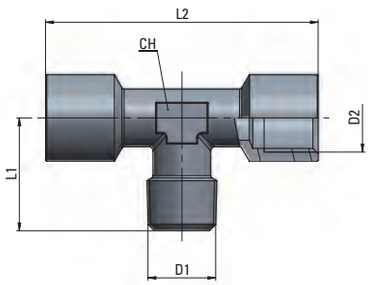
RX 24

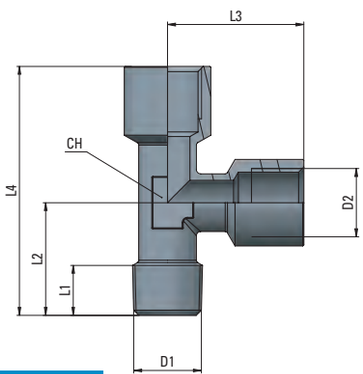
T F-M-F | Male-female stud tee | Té femelle-mâle-femelle | T Auf-Einschraub



Type	D1	D2	L1	L2	CH	g
24 18 18	R1/8	G1/8	17	44	10	22,5
24 14 14	R1/4	G1/4	21,5	52	12	34,6
24 38 38	R3/8	G3/8	24,5	56	17	57,5
24 12 12	R1/2	G1/2	30,5	68	19	110,5

RX 25

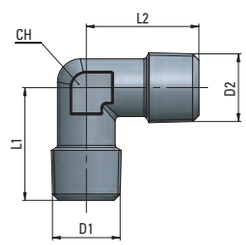
T M-F-F | Male-female, lateral tee | Té mâle-femelle-femelle | T Ein-Aufschraub



	Type	D1	D2	L1	L2	L3	L4	CH	g
new	25 18 18	R1/8	G1/8	6,5	17	22	39	10	-
new	25 14 14	R1/4	G1/4	9,5	21,5	26	47,5	12	35,7
new	25 38 38	R3/8	G3/8	10	24,5	28	52,5	17	57,5
new	25 12 12	R1/2	G1/2	12	30,5	42,5	64,5	19	-

RX 35

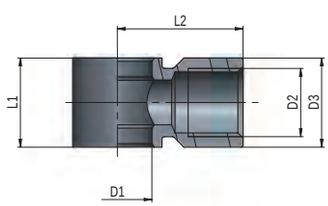
Gomito M-M | Male-male elbow | Equerre mâle | Einschraub-Winkelstück



Type	D1	D2	L1	L2	CH	g
35 18 18	R1/8	R1/8	17	17	10	10,1
35 14 14	R1/4	R1/4	21,5	21,5	12	20,3
35 38 38	R3/8	R3/8	24,5	24,5	17	37,9
35 12 12	R1/2	R1/2	30,5	30,5	19	62

RX 42

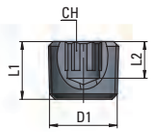
Anello filettato | Single banjo ring | Bague orientable simple | Einfaches Schwenkringstück



Type	D1	D2	D3	L1	L2	g
42 00 18	10	G1/8	14	15	18,5	15
42 00 14	13,2	G1/4	17	17	24	22,8
42 00 38	17	G3/8	20	20	29	37,2
42 00 12	21	G1/2	26	24	34,5	60,1

RX 43

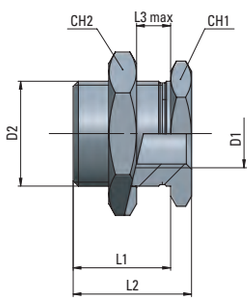
Tappo conico | Taper plug | Bouchon cônique | Verschlussstopfen, kegelig



Type	D1	L1	L2	CH	g
43 00 18	R1/8	7,5	6	5	2,6
43 00 14	R1/4	11	7	6	8,4
43 00 38	R3/8	11,5	8	8	13,3
43 00 12	R1/2	14	9.9	10	25,7

RX 44

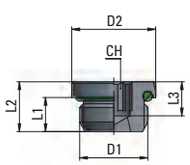
Passaparete filettato | Bulkhead connector | Traversée en cloison | Schottverschraubung



	Type	D1	D2	L1	L2	L3 Max	CH1	CH2	g
new	44 00 14	G1/4	M20x1,5	17,5	22,6	13	24	27	-
new	44 00 38	G3/8	M26x1,5	18.5	24,5	13	30	32	-
new	44 00 12	G1/2	M28x1,5	24.5	31.5	19	32	36	-

RX 46

Tappo maschio con oring | Male plug with oring | Bouchon mâle avec oring | Einschraubstopfen mit Oring



-20°C + 200°C

Type	D1	D2	L1	L2	L3	CH	g
46 00 18	G1/8	13	5	8	6	5	4,1
46 00 14	G1/4	16	6,5	9,5	6.5	6	8,3
46 00 38	G3/8	20	7	10.5	8	8	14,2
46 00 12	G1/2	25	8,5	13	8.5	10	28,8

Guarnizioni FPM -FPM Seals - Joint d'étanchéité FPM - FPM Dichtung

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RT LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi Standard per gli Impianti Frenanti
Standard Fittings for Air Brake Systems
Raccords Standard pour Systèmes de Freinage Pneumatique
Standardverschraubungen für Druckluftbremssysteme

I

I raccordi standard della Serie RT realizzati completamente in ottone, sono costituiti da nippli, riduzioni, raccordi a T, raccordi ad L e molto altro. Grazie alla grande varietà di funzioni ausiliarie, risulta molto evidente il ruolo di completamento che questa serie svolge nei confronti della serie madre, MT ideata per gli impianti frenanti dei veicoli industriali e commerciali. Tutti i raccordi RT hanno ottenuto la certificazione TÜV secondo gli standard DIN 74324:1996, DIN EN ISO 9227:2017 e 60068-2-6:2008.

GB

The standard fittings of the RT line, also known as "Accessory line", are made of brass. RT line consists of nipples, reductions, Tees, L fittings just to name a few and it is developed to complement the MT line.
All RT fittings are TÜV certified according to DIN 74324: 1996, DIN EN ISO 9227: 2017 and 60068-2-6: 2008.

F

Les raccords standard de la série RT sont entièrement en laiton. La série se compose de mamelons, de réductions, de raccords en T en L et beaucoup plus. Grâce à la grande variété de fonctions complèmentaires, cette série joue le rôle de complèment de la série MT.
Tous les raccords RT sont certifié TÜV selon DIN 74324: 1996, DIN EN ISO 9227: 2017 et 60068-2-6: 2008.

D

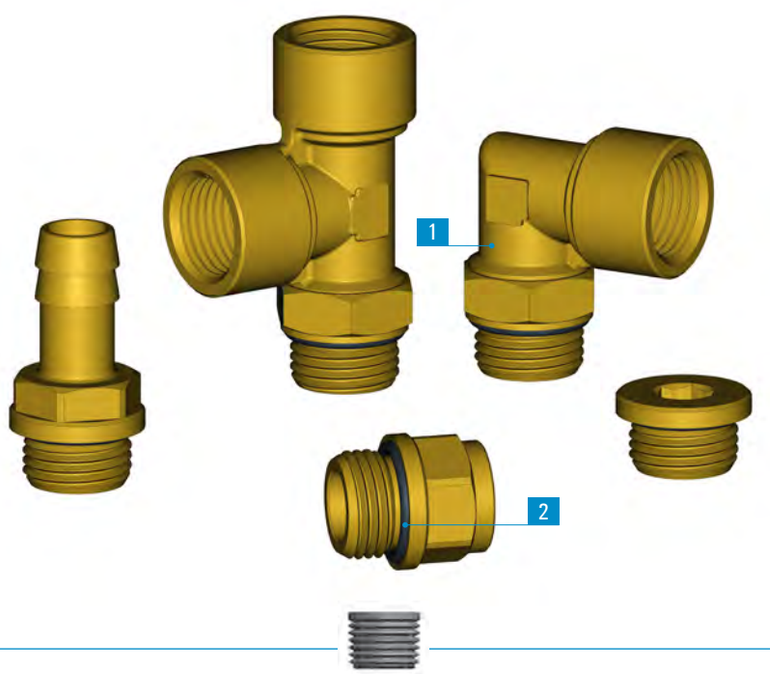
Die RT-Linie ist vollständig aus Messing und besteht aus Nippeln, Reduzierungen, T und L-Stück und mehr. Die RT-Linie, auch bekannt als Zubehörlinie, ist eng mit der MT Baureihe verbunden und dient als ein wichtiges Ergänzungselement davon.
Alle RT-Fittings sind TÜV zertifiziert nach DIN 74324: 1996, DIN EN ISO 9227: 2017 und 60068-2-6: 2008.

RT

1	2
Corpo del raccordo Fitting Body Corps du raccord Verschraubungskörper	Guarnizioni Seals Joint d'étanchéité Dichtung
Ottone UNI EN 12164 CW614N - UNI EN 12165 CW617N Brass UNI EN 12164 CW614N - UNI EN 12165 CW617N Laiton UNI EN 12164 CW614N - UNI EN 12165 CW617N Messing UNI EN 12164 CW614N - UNI EN 12165 CW617N	NBR NBR NBR NBR

-50°C ÷ 100°C

0 – 16 bar



M5x0,8	M12x1,5	M16x1,5	M22x1,5	G1/8	G1/4	G3/8	G1/2	G3/4	G1"	R1/8	R1/4	R3/8	R1/2	R3/4	R1"
●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

SPECIFICHE TECNICHE

Campi di applicazione:
Sistemi frenanti dei veicoli commerciali e industriali.

Coppie di Serraggio
Per i dati relativi alle *Coppie di Serraggio* della serie RT, fare riferimento alla tabella rappresentata a pagina 74.

DATA SHEET

Application fields:
Air Brake Systems on Commercial and Industrial Vehicles.

Tightening Torque Forces
As for RT *Tightening Torque Forces* please refer to the data at page 74.

REINSEIGNEMENTS TECHNIQUES

Domaines d'emploi:
Systèmes de freinage pour véhicules industriels et commerciaux.

Couples de Serrage
Pour les *Couples de Serrage* de la série RT, veuillez Vous référer aux données de la page 74.

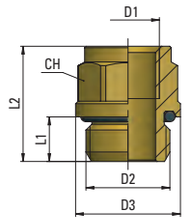
TECHNISCHE AUSKÜNFTE

Anwendungsbereiche:
Bremsanlagen für Industrie und Nutzfahrzeuge.

Drehmomente
Bezüglich der RT-*Drehmomente,* bitte sich auf die Daten auf Seite 74 beziehen.

RT 15

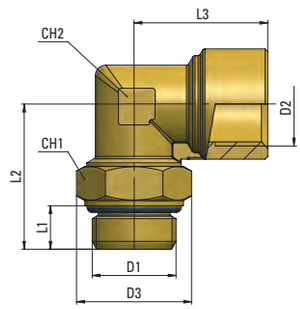
Riduzione F-M cilindrica | Female-Male reducing connector, parallel | Réduction femelle-mâle, cylindrique | Reduzierstück, Auf-Einschraub, zylindrisch



Type	D1	D2	D3	L1	L2	CH	g
new 15 M12x1,5 M16x1,5	M12x1,5	M16x1,5	20	8,5	22	17	22,7
new 15 M12x1,5 M22x1,5	M12x1,5	M22x1,5	25,5	8,5	17,5	17	34,4
new 15 M16x1,5 M22x1,5	M16x1,5	M22x1,5	25,5	8,5	17,5	21	28,7

RT 22

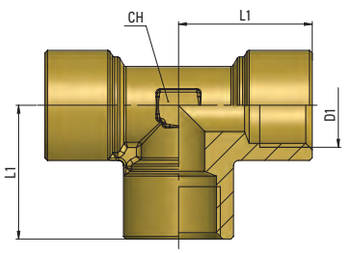
Gomito M-F | Male-female elbow | Equerre mâle-femelle | Ein-Aufschraub-Winkel



Type	D1	D2	D3	L1	L2	L3	CH1	CH2	g
new 22 M16x1,5 M16x1,5	M16x1,5	M16x1,5	22	8,3	27,7	25,5	19	15	58,5
new 22 M16x1,5 M22x1,5	M22x1,5	M16x1,5	31,2	8,1	27,3	25,5	27	15	79
new 22 M22x1,5 M22x1,5	M22x1,5	M22x1,5	31,2	8,1	30,5	30,5	27	19	111,2

RT 23

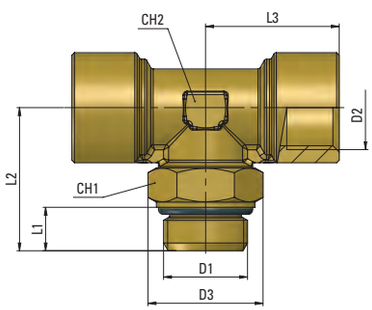
T F-F-F | Female tee | T femelle | T Aufschraub



Type	D1	L1	CH	g
new 23 M16x1,5 M16x1,5	M16x1,5	25,5	15	82,5
new 23 M22x1,5 M22x1,5	M22x1,5	30,5	19	143,9

RT 24

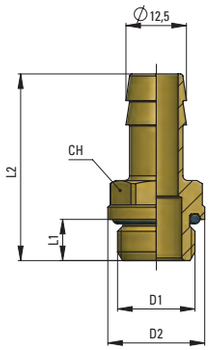
T F-M-F | Male-female stud tee | T femelle-mâle-femelle | T Stück, zylindrisch



Type	D1	D2	D3	L1	L2	L3	CH1	CH2	g
new 24 M12x1,5 M16x1,5	M12x1,5	M16x1,5	17,3	8,3	26,7	25,5	15	15	76,9
new 24 M16x1,5 M16x1,5	M16x1,5	M16x1,5	22	8,3	27,7	25,5	19	15	81,9
new 24 M16x1,5 M22x1,5	M22x1,5	M16x1,5	31,2	8,1	27,6	25,5	27	15	102,6
new 24 M22x1,5 M22x1,5	M22x1,5	M22x1,5	31,2	8,1	30,5	30,5	27	19	150,1

RT 30

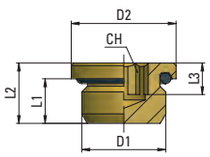
Portagomma | Hose connector | Douille cannelée | Schlauchtülle



Type	D1	D2	L1	L2	CH	g
new 30 12,5 M16x1,5	M16x1,5	20	8,5	38,5	17	25,2
new 30 12,5 M22X1,5	M22x1,5	25,5	8,5	38,5	17	37,1

RT 46

Tappo maschio con oring | Male plug with oring | Bouchon mâle avec oring | Einschraubstopfen mit Oring



Type	D1	D2	L1	L2	L3	CH	g
new 46 00 M12x1,5	M12x1,5	15	8,5	11,5	6	6	8,4
new 46 00 M16x1,5	M16x1,5	20	8,5	11,5	6	8	15,4
new 46 00 M22x1,5	M22x1,5	25,5	8,5	11,5	7	12	26,5

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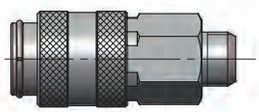
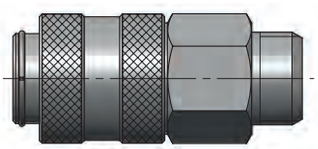
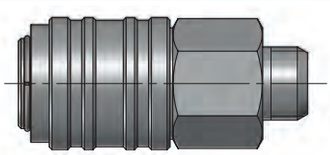
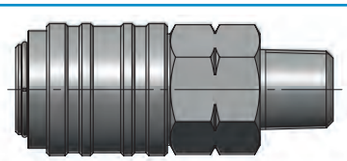
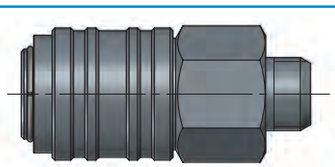
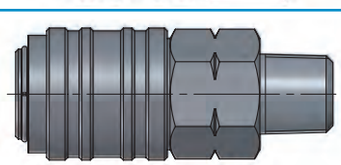
Type	Profiles	ø			Pag. ref.
GU20	Mini	2,5		BSP	212
GU21	Midi	5,5		BSP	214
GU26	European	7,4		BSP	216
GU10	Multi	5,5 ÷ 7,4		BSP	219
PU10	Multi	5,5 ÷ 7,4		NPT	222
GX10 inox	Multi	5,5 ÷ 7,4		BSP	247
PUX10 inox	Multi	5,5 ÷ 7,4		NPT	251

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GU LINE

cmatic®
PNEUMATIC FITTINGS

Innesti Rapidi
Couplings
Coupleurs
Kupplungen

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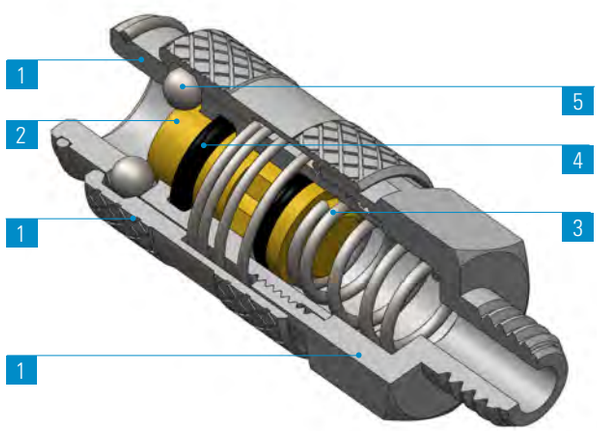
GU 20

Innesto rapido DN2,5 | Coupling DN2,5 | Coupleur DN2,5 | Kupplung DN2,5

1	2	3	4	5	
Corpo **Body** **Corps** **Körper**	**Otturatore** **Valve** **Clapet** **Ventil**	**Molle** **Springs** **Ressorts** **Feder**	**Guarnizioni** **Seals** **Joint d'étanchéité** **Dichtung**	**Sfere** **Balls** **Billes** **Kugel**	**Innesti** **Plugs** **Embouts** **Stecker**
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Ms Vernickelt UNI EN 12164 CW614N	Ottone UNI EN 12164 CW614N Brass UNI EN 12164 CW614N Laiton UNI EN 12164 CW614N Messing UNI EN 12164 CW614N	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	NBR NBR NBR NBR	Acciaio Inox AISI 420 Stainless Steel AISI 420 Acier Inox AISI 420 Edelstahl AISI 420	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Ms Vernickelt UNI EN 12164 CW614N

-20°C ÷ 80°C | 0 ÷15 bar | 2,5 mm | 170 Nl/min (6 bar - Δp = 1bar)

Scala 1:1
Scale 1:1
Echelle 1:1
Maßstab 1:1



Campi di applicazione:
Impianti pneumatici.

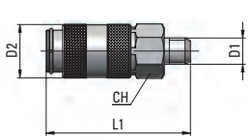
Application fields:
Pneumatic circuits.

Domaines d'application:
Circuits pneumatiques.

Anwendungsbereiche:
Pneumatische Anlagen.

GU 20-11

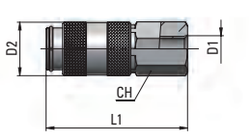
Innesto rapido con filetto maschio | Male coupling | Coupleur mâle | Einschraubkupplung



Type	D1	D2	L1	CH	g
11 00 M5	**M5x0,8**	10	27.5	9	10
11 00 18	**G1/8**	10	29	12	14

GU 20-12

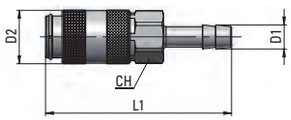
Innesto rapido con filetto femmina | Female coupling | Coupleur femelle | Aufschraubkupplung



Type	D1	D2	L1	CH	g
12 00 M5	**M5x0,8**	10	27	9	11
12 00 18	**G1/8**	10	30.5	12	15

GU 20-13

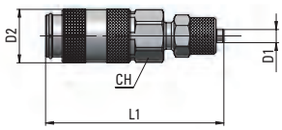
Innesto rapido con portagomma | Coupling with hose connection | Coupleur avec douille cannelée | Kupplung mit Schlauchtülle



Type	Ø Tubo	D1	D2	L1	CH	g
13 03 00	**3**	3,6	10	35.5	9	9
13 04 00	**4**	4,6	10	35.5	9	10

GU 20-15

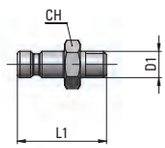
Innesto rapido con calzamento | Coupling with nut fitting | Coupleur avec raccord à écrou | Kupplung mit Überwurfverschraubung



Type	D1	D2	L1	CH	g
15 04 00	**4x2,5**	10	34	9	11
15 06 00	**6x4**	10	35	9	13

GU 20-20

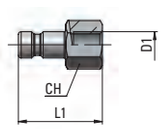
Innesto con filetto maschio | Male plug | Embout mâle | Einschraubverschlußnippel



Type	D1	L1	CH	g
20 00 M5	**M5x0,8**	17	8	2
20 00 18	**G1/8**	20	12	6

GU 20-21

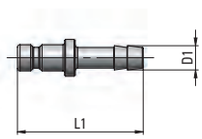
Innesto con filetto femmina | Female plug | Embout femelle | Aufschraubverschlußnippel



Type	D1	L1	CH	g
21 00 M5	**M5x0,8**	16	8	3
21 00 18	**G1/8**	19	12	6

GU 20-22

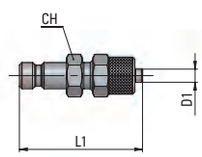
Innesto con portagomma | Plug with hose connection | Embout avec douille cannelée | Schlauchtülle



Type	Ø Tubo	D1	L1	g
22 03 00	**3**	3,6	24	2
22 04 00	**4**	4,6	24	2

GU 20-23

Innesto con raccordo a calzamento | Plug with nut fitting | Embout avec raccord à écrou | Verschlußtülle mit Überwurfmutter



Type	D1	L1	CH	g
23 04 00	**4x2,5**	23.5	7	4
23 06 00	**6x4**	24.5	8	6

GU 21

Innesto rapido DN5 | Coupling DN5 | Coupleur DN5 | Kupplung DN5

1	2	3	4	5	
Corpo Body Corps Körper	Otturatore Valve Clapet Ventil	Molle Springs Ressorts Feder	Guarnizioni Seals Joint d'étanchéité Dichtung	Sfere Balls Billes Kugel	Innesti Plugs Embouts Stecker
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Ms Vernickelt UNI EN 12164 CW614N	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Ms Vernickelt UNI EN 12164 CW614N	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	NBR NBR NBR NBR	Acciaio Inox AISI 420 Stainless Steel AISI 420 Acier Inox AISI 420 Edelstahl AISI 420	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Ms Vernickelt UNI EN 12164 CW614N

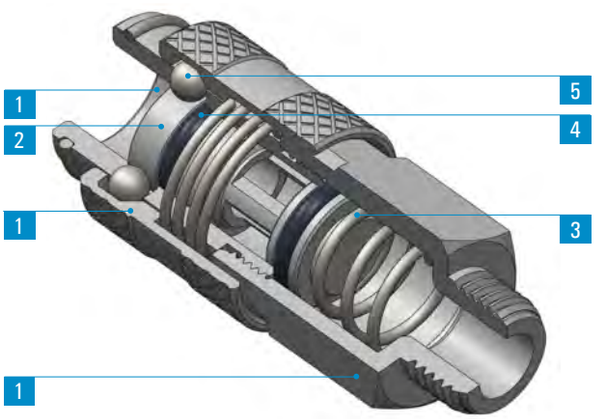
-20°C ÷ 80°C

0 ÷ 15 bar

5 mm

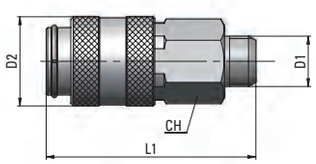
600 Nl/min
(6 bar · Δp = 1bar)

Scala 1:1
Scale 1:1
Echelle 1:1
Maßstab 1:1



GU 21-11

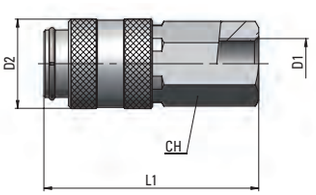
Innesto rapido con filetto maschio | Male coupling | Coupleur mâle | Einschraubkupplung



Type	D1	D2	L1	CH	g
11 00 18	G1/8	17	40	14	33,5
11 00 14	G1/4	17	42	17	43,6

GU 21-12

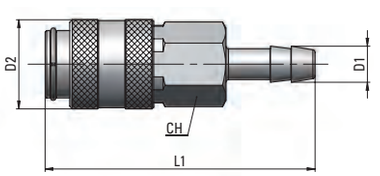
Innesto rapido con filetto femmina | Female coupling | Coupleur femelle | Aufschraubkupplung



Type	D1	D2	L1	CH	g
12 00 18	G1/8	17	41	14	37
12 00 14	G1/4	17	46	17	53

GU 21-13

Innesto rapido con portagomma | Coupling with hose connection | Coupleur avec douille cannelée | Kupplung mit Schlauchtülle



Type	Ø Tubo	D1	D2	L1	CH	g
13 04 00	4	4.9	17	51,5	14	34
13 06 00	6	6.9	17	51,5	14	35,1

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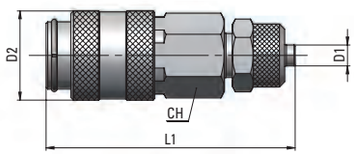
GU 21-15

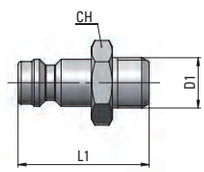
Innesto rapido con calzamento | Coupling with nut fitting | Coupleur avec raccord à écrou | Kupplung mit Überwurfverschraubung



Type	D1	D2	L1	CH	g
15 06 00	**6x4**	17	47.5	14	38
15 08 00	**8x6**	17	48.5	14	39,7

GU 21-20

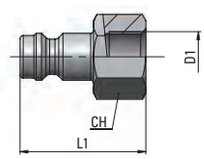
Innesto con filetto maschio | Male plug | Embout mâle | Einschraubverschlußnippel



Type	D1	L1	CH	g
20 00 18	**G1/8**	25	14	11,4
20 00 14	**G1/4**	27	17	19

GU 21-21

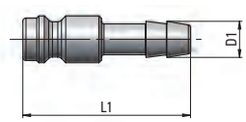
Innesto con filetto femmina | Female plug | Embout femelle | Aufschraubverschlußnippel



Type	D1	L1	CH	g
21 00 18	**G1/8**	24	14	13,3
21 00 14	**G1/4**	27	17	19,7

GU 21-22

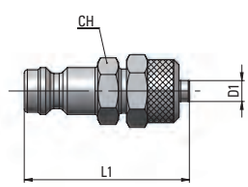
Innesto con portagomma | Plug with hose connection | Embout avec douille cannelée | Schlauchtülle



Type	Ø Tubo	D1	L1	g
22 04 00	**4**	4.9	32	5,8
22 06 00	**6**	6.9	32	7,2

GU 21-23

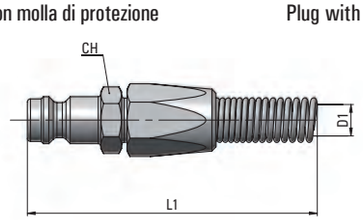
Innesto con raccordo a calzamento | Plug with nut fitting | Embout avec raccord à écrou | Verschlußtülle mit Überwurfmutter



Type	D1	L1	CH	g
23 06 00	**6x4**	31.5	11	15,1
23 08 00	**8x6**	32.5	13	20,2

GU 21-24

Innesto con molla di protezione | Plug with hose protection spring | Embout avec ressort protection tube | Verschlußtülle mit Knickschutzfeder



Type	D1	L1	CH	g
24 06 00	**6x4**	110	11	23,9
24 08 00	**8x6**	120	13	30,5

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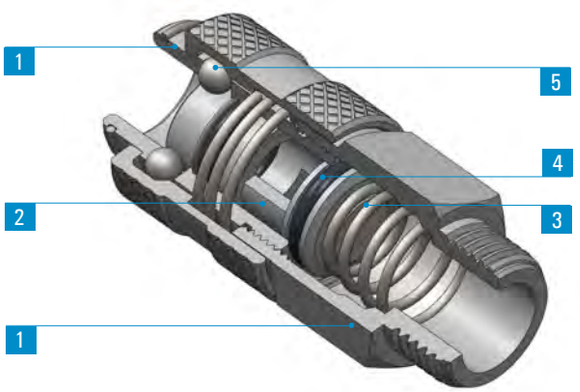
GU 26

Innesto rapido DN7,4 | Coupling DN7,4 | Coupleur DN7,4 | Kupplung DN7,4

1	2	3	4	5	
Corpo Body Corps Körper	Otturatore Valve Clapet Ventil	Molle Springs Ressorts Feder	Guarnizioni Seals Joint d'étanchéité Dichtung	Sfere Balls Billes Kugel	Innesti Plugs Embouts Stecker
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Ms Vernickelt UNI EN 12164 CW614N	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Ms Vernickelt UNI EN 12164 CW614N	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	NBR NBR NBR NBR	Acciaio Inox AISI 420 Stainless Steel AISI 420 Acier Inox AISI 420 Edelstahl AISI 420	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Ms Vernickelt UNI EN 12164 CW614N

-20°C ÷ 80°C | 0 ÷ 15 bar | 7,4 mm | 1400 Nl/min (6 bar · Δp = 1bar)

Profilo Europeo
European Profile
Profil européen
Europäisches Profil



Campi di applicazione:
Impianti pneumatici.

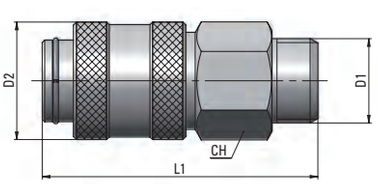
Application fields:
Pneumatic circuits.

Domaines d'application:
Circuits pneumatiques.

Anwendungsbereiche:
Pneumatische Anlagen.

GU 26-11

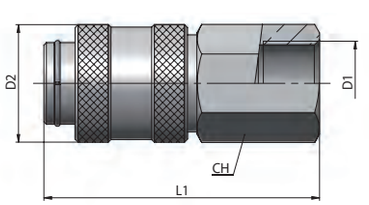
Innesto rapido con filetto maschio | Male coupling | Coupleur mâle | Einschraubkupplung



Type	D1	D2	L1	CH	g
11 00 14	G1/4	23	51.5	20	82
11 00 38	G3/8	23	51.5	20	89
11 00 12	G1/2	23	51.5	24	107

GU 26-12

Innesto rapido con filetto femmina | Female coupling | Coupleur femelle | Aufschraubkupplung



Type	D1	D2	L1	CH	g
12 00 14	G1/4	23	56.5	20	91
12 00 38	G3/8	23	58	20	90
12 00 12	G1/2	23	59.5	24	106

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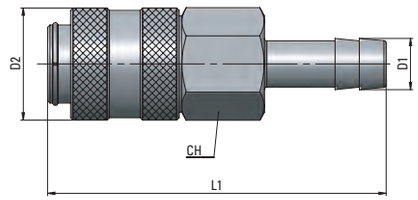
GU 26-13

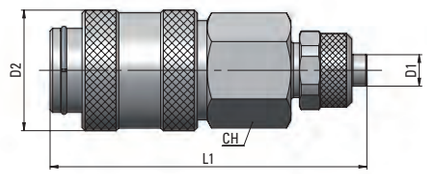
Innesto rapido con portagomma | Coupling with hose connection | Coupleur avec douille cannelée | Kupplung mit Schlauchtülle



Type	Ø Tubo	D1	D2	L1	CH	g
13 06 00	6	7,5	23	69.5	20	90
13 09 00	9	10,5	23	69.5	20	91
13 13 00	13	14,5	23	69.5	20	89

GU 26-15

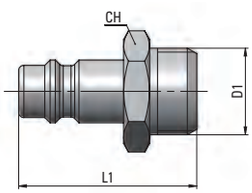
Innesto rapido con calzamento | Coupling with nut fitting | Coupleur avec raccord à écrou | Kupplung mit Überwurfverschraubung



Type	D1	D2	L1	CH	g
15 08 00	8x6	23	58	20	90
15 10 00	10x8	23	60	20	91

GU 26-20

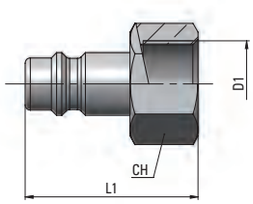
Innesto con filetto maschio | Male plug | Embout mâle | Einschraubverschlußnippel



Type	D1	L1	CH	g
20 00 14	G1/4	33	17	22
20 00 38	G3/8	34	20	29
20 00 12	G1/2	37	24	50

GU 26-21

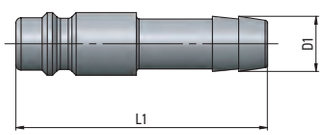
Innesto con filetto femmina | Female plug | Embout femelle | Aufschraubverschlußnippel



Type	D1	L1	CH	g
21 00 14	G1/4	33	17	23,5
21 00 38	G3/8	33	20	26
21 00 12	G1/2	37	24	39

GU 26-22

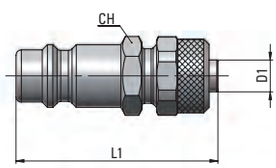
Innesto con portagomma | Plug with hose connection | Embout avec douille cannelée | Schlauchtülle



Type	Ø Tubo	D1	L1	g
22 06 00	6	7,5	48	14
22 08 00	8	9,5	48	16
22 09 00	9	10,5	48	18
22 10 00	10	11,5	48	20
22 13 00	13	14,5	48	34

GU 26-23

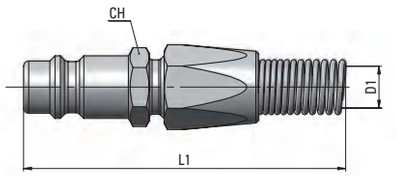
Innesto con raccordo a calzamento | Plug with nut fitting | Embout avec raccord à écrou | Verschlußtülle mit Überwurfmutter



Type	D1	L1	CH	g
23 06 00	6x4	37.5	13	20
23 08 00	8x6	38.5	13	22
23 10 00	10x8	41.5	15	29

GU 26-24

Innesto con molla di protezione | Plug with hose protection spring | Embout avec ressort protection tube | Verschlußtülle mit Knickschutzfeder



Type	D1	L1	CH	g
24 06 00	**6x4**	120	13	30
24 08 00	**8x6**	125	13	34
24 10 00	**10x8**	135	15	52

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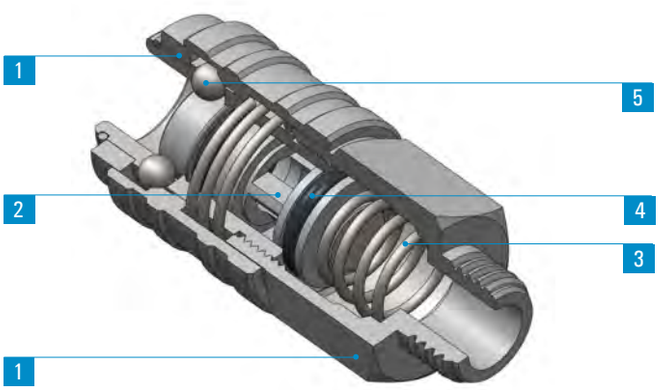
GU 10-11

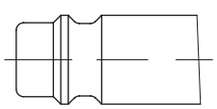
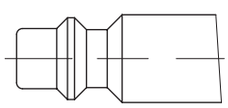
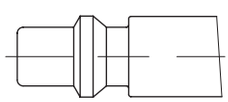
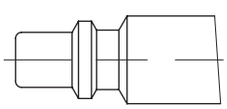
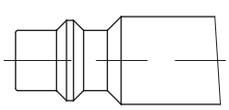
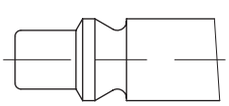
Innesto rapido multipresa | Multi socket quick coupling | Coupleur multiprofil | Multiprofilkupplung

1	2	3	4	5	GU 11
Corpo Body Corps Körper	Otturatore Valve Clapet Ventil	Molle Springs Ressorts Feder	Guarnizioni Seals Joint d'étanchéité Dichtung	Sfere Balls Billes Kugel	Innesti Plugs Embouts Stecker
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Ms Vernickelt UNI EN 12164 CW614N	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Ms Vernickelt UNI EN 12164 CW614N	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	NBR NBR NBR NBR	Acciaio Inox AISI 420 Stainless Steel AISI 420 Acier Inox AISI 420 Edelstahl AISI 420	Ottone Nichelato Brass ickel plated Laiton Nickelé Ms Vernickelt

-20°C ÷ 80°C

0 ÷15 bar



Intercambiabilità con i profili Suitable with following plugs profiles Interchangéable avec les suivants profils Austauschbar mit folgenden Profilen		Portata Flow rate Débit Durchfluß	(6 bar - Δp = 1bar)
	Profilo Europeo European Profile Profil européen Europäisches Profil	820	
	Profilo ISO 6150 B ISO 6150 B Profile Profil ISO 6150 B ISO 6150 B Profil	715	
	Profilo Svedese Standard Swedisch Profile Profil Standard Suédois Standard schwedisches Profil	725	
	Profilo Italiano Standard Italian Profile Profil Standard Italien Standard Italienisches Profil	670	
	Profilo MIL C4109 MIL C4109 Profile Profil MIL C4109 MIL C4109 Profil	715	
	Profilo ARO 210 ARO 210 Profile Profil ARO 210 ARO 210 Profil	705	

Scala 1:1 - Scale 1:1 - Echelle 1:1 - Maßstab 1:1

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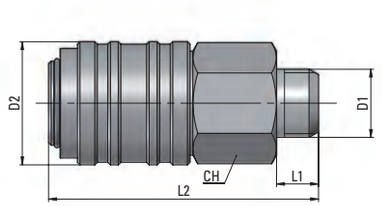
GU 10-11

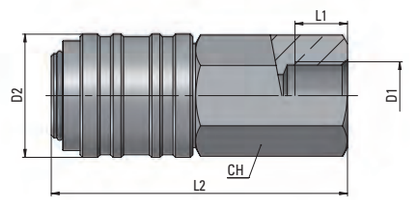
Innesto rapido con filetto maschio | Male coupling | Coupleur mâle | Einschraubkupplung



Type	D1	D2	L1	L2	CH	g
11 00 14	G1/4	23,5	10	51.5	20	90
11 00 38	G3/8	23,5	11	51.5	20	93
11 00 12	G1/2	23,5	11	51.5	24	118

GU 10-12

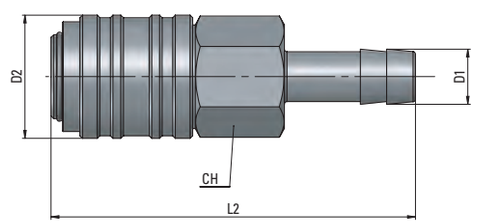
Innesto rapido con filetto femmina | Female coupling | Coupleur femelle | Aufschraubkupplung



Type	D1	D2	L1	L2	CH	g
12 00 14	G1/4	23,5	10	56.5	20	109
12 00 38	G3/8	23,5	11	58	20	103
12 00 12	G1/2	23,5	11	59.5	24	134

GU 10-13

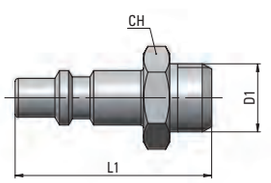
Innesto rapido con portagomma | Coupling with hose connection | Coupleur avec douille cannelée | Kupplung mit Schlauchtülle



Type	D1	D2	L2	CH	g
13 06 00	6	23,5	69.5	20	91
13 09 00	9	23,5	69.5	20	93
13 13 00	13	23,5	69.5	20	107

GU 11-20

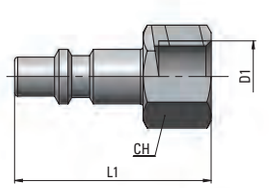
Innesto Italia con filetto maschio | Male plug, italian profile | Embout mâle, profil italien | Einschraubverschlußnippel, italienisches Profil



Type	D1	L1	CH	g
20 00 14	G1/4	37,5	14	19,1
20 00 38	G3/8	40	19	28
20 00 12	G1/2	40,5	24	36,2

GU 11-21

Innesto Italia con filetto femmina | Female plug, italian profile | Embout femelle, profil italien | Aufschraubverschlußnippel, italienisches Profil



Type	D1	L1	CH	g
21 00 14	G1/4	39	17	23
21 00 38	G3/8	41	19	26
21 00 12	G1/2	44	25	51,1

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PU LINE

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PNEUMATIC FITTINGS

Innesti Rapidi NPT
NPT Couplings
Coupleurs, NPT
Kupplungen, NPT

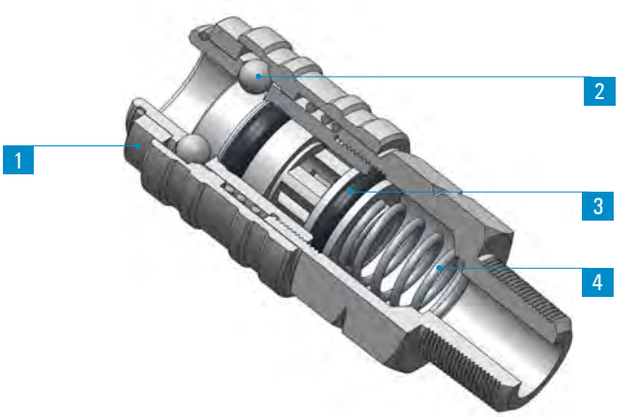
PU 10

Innesto rapido multipresa | Multi socket quick coupling | Coupleur multiprofil | Multiprofilkupplung

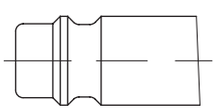
1	2	3	4
Corpo Body Corps Körper	Sfere Balls Billes Kugel	Guarnizioni Seals Joint d'étanchéité Dichtung	Molle Springs Ressorts Feder
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Ms Vernickelt UNI EN 12164 CW614N	Acciaio Inox AISI 420 Stainless Steel AISI 420 Acier Inox AISI 420 Edelstahl AISI 420	NBR NBR NBR NBR	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302

-20°C ÷ 80°C

0 ÷ 15 bar

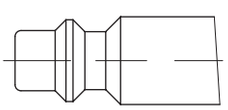


Intercambiabilità con i profili Suitable with following plugs profiles Interchangéable avec les suivants profils Austauschbar mit folgenden Profilen	Portata Flow rate Débit Durchfluß	Nl/min (6 bar - Δp = 1bar)



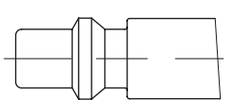
Profilo Europeo
European Profile
Profil européen
Europäisches Profil

820



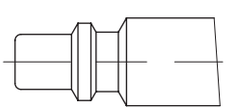
Profilo ISO 6150 B
ISO 6150 B Profile
Profil ISO 6150 B
ISO 6150 B Profil

715



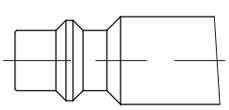
Profilo Svedese
Standard Swedisch Profile
Profil Standard Suédois
Standard schwedisches Profil

725



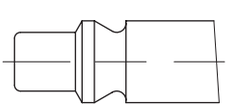
Profilo Italiano
Standard Italian Profile
Profil Standard Italien
Standard Italienisches Profil

670



Profilo MIL C4109
MIL C4109 Profile
Profil MIL C4109
MIL C4109 Profil

715



Profilo ARO 210
ARO 210 Profile
Profil ARO 210
ARO 210 Profil

705

Scala 1:1 - Scale 1:1 - Echelle 1:1 - Maßstab 1:1

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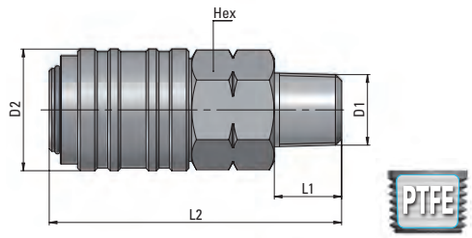
PU 10-11

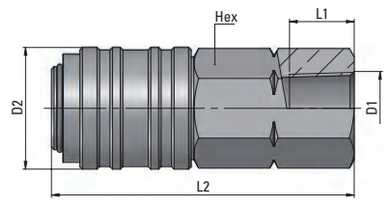
Innesto rapido con filetto maschio | Male coupling | Coupleur mâle | Einschraubkupplung



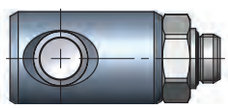
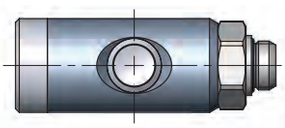
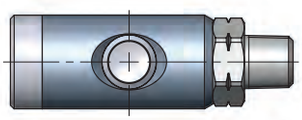
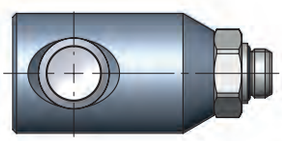
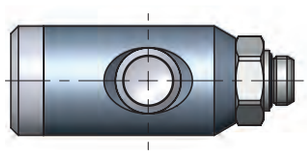
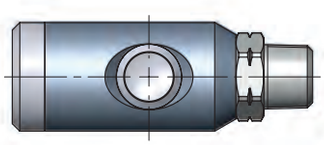
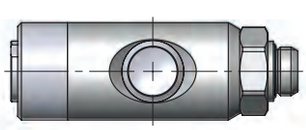
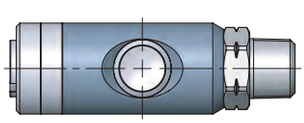
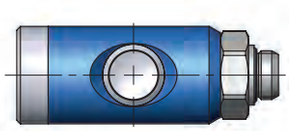
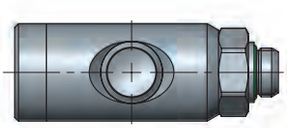
Type	D1 NPTF	D2	L1	L2	CH	g ⚖
11 00 1/4	**1/4**	23,5	13	56,5	20	90,9
11 00 3/8	**3/8**	23,5	13	56,5	20	99,3
11 00 1/2	**1/2**	23,5	17	59,5	24	129,2

PU 10-12

Innesto rapido con filetto femmina | Female coupling | Coupleur femelle | Aufschraubkupplung



Type	D1 NPTF	D2	L1	L2	CH	g ⚖
12 00 1/4	**1/4**	23,5	12,5	58,5	20	113
12 00 3/8	**3/8**	23,5	12,5	58,5	20	104
12 00 1/2	**1/2**	23,5	13,5	62	24	140,5

Type	Profiles	ø			Pag. ref.
GU41	ISO 6150 C-10	5,5		BSP	226
GU42	ISO 6150 B-12 US MIL4109	5,5		BSP	228
PU42	ISO 6150 B-12 US MIL4109	5,5		NPT	240
GU43	ISO 6150 C-14	8		BSP	230
GU44	ISO 6150 B-15	8		BSP	232
PU44	ISO 6150 B-15	8		NPT	242
GU45	ARO 210	5,5		BSP	234
PU45	ARO 210	8		NPT	244
GU46	European Profile	7,4		BSP	236
GX46 inox	European Profile	7,4		BSP	256

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GU Safety

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PNEUMATIC FITTINGS

Innesti Rapidi di Sicurezza
Safety Couplings
Coupleurs de Sécurité
Sicherheitskupplungen

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GU 41

Innesto rapido a pulsante con dispositivo di sicurezza per profili ISO 6150 C-10

Push-Button safety coupling according to ISO 6150 C-10

Coupleur securite a bouton selon profil ISO 6150 C-10

Sicherheitskupplung mit Knopf gemäss ISO 6150 C-10 profil

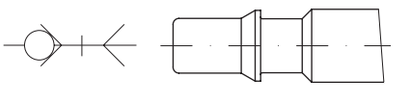
1	2	3	4	5	6	
Corpo Body Corps Körper	Otturatore Valve Clapet Ventil	Vite Thread Filet Gewindstück	Pulsante Button Bouton Knopf	Guarnizioni Seals Joint d'étanchéité Dichtung	Molle Springs Ressorts Feder	Innesti Plugs Embouts Stecker
Alluminio Anodizzato Al2011 Anodised Aluminium Al2011 Aluminium anodisé Al2011 Eloxiertes Aluminium Al2011	Ottone UNI EN 12164 CW614N Brass UNI EN 12164 CW614N Laiton UNI EN 12164 CW614N Messing UNI EN 12164 CW614N	Ottone nichelato UNI EN 12164 CW614N Brass nickel plated UNI EN 12164 CW614N Laiton nickelé UNI EN 12164 CW614N Messing vernickelt UNI EN 12164 CW614N	Acciao Indurito e zincato 11SMnPb37 Hardened, zinc plated steel 11SMnPb37 Acier trempé et zingué 11SMnPb37 Stahl gehärtet und verzinkt 11SMnPb37	NBR NBR NBR NBR	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	Acciao Indurito e zincato 11SMnPb37 Hardened, zinc plated steel 11SMnPb37 Acier trempé et zingué 11SMnPb37 Stahl gehärtet und verzinkt 11SMnPb37

-20°C ÷ 80°C

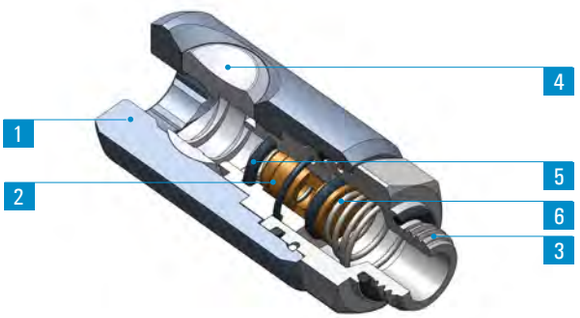
0 ÷12 bar

5,5 mm

680 Nl/min
(6 bar - Δp = 1bar)



Profilo ISO 6150 C-10
ISO 6150 C-10 Profile
Profil ISO 6150 C-10
ISO 6150 C-10 Profil



L'Innesto Rapido rimane orientabile anche dopo l'installazione.
The Coupling will remain swivelling after installation.
Le coupleur peut être orienté après le montage.
Die Kupplung bleibt nach der Montage drehbar.

CONNESSIONE - DISCONNESSIONE

Inserire semplicemente l'innesto nel corpo.

Per la disconnessione dell'innesto dal corpo femmina è necessario seguire 2 semplici fasi:
L'innesto è inserito nel corpo femmina
Fase 1:
Premere il pulsante di sgancio permettendo così lo scarico dell'aria del circuito a valle; l'innesto in questa fase è ancora trattenuto all'interno del corpo femmina.
Fase 2:
Premere nuovamente il pulsante per rimuovere l'innesto dal corpo femmina.

CONNECTION - TO RELEASE

Insert the plug into the Coupling

To disconnect the plug follow instructions below:
Plug inserted in Coupling
Step 1:
Press the button once to vent the downstream air from the circuit; at this time the plug is still captive in the Coupling.
Step 2:
Press the button one more time to release the plug.

CONNEXION - DECONNEXION

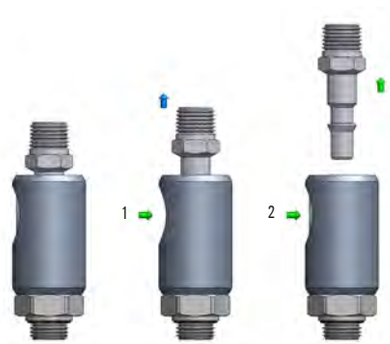
Insérer l'embout dans le coupleur pour accoupler les deux composants

Pour sortir l'embout suivre les indications ci-dessous:
Embout inséré dans le coupleur
Phase 1:
Appuyer sur le bouton pour que la pression s'échappe du circuit. L'embout reste cependant encore dans le coupleur.
Phase 2:
Pour déconnecter l'embout, appuyer une deuxième fois sur le bouton.

ZUM KUPPELN - ZUM ENTKUPPELN

Stecker in die Kupplung einstecken

Zum Entkuppeln, den folgen den Anweisungen folgen:
Der Stecker ist gekuppelt
Phase 1:
Auf dem Knopf einmal drücken. Dadurch wird die Anlage entlüftet dennoch bleibt der Stecker in der Kupplung gesichert.
Phase 2:
Erst bei einem zweiten Drücken auf dem Knopf wird der Stecker gelöst.



Zum Entkuppeln, den folgen den Anweisungen folgen:

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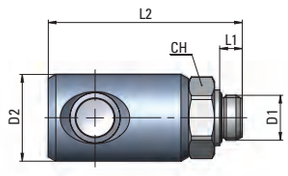
GU 41-10

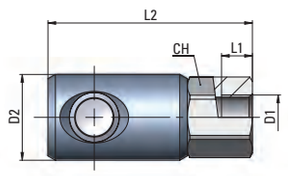
Innesto rapido con filetto maschio | Male coupling | Coupleur mâle | Einschraubkupplung



Type	D1	D2	L1	L2	CH	g
10 00 14	G1/4	25	6,5	56.1	21	80,5
10 00 38	G3/8	25	7	56.1	21	90
10 00 12	G1/2	25	8,5	58.6	25	115,1

GU 41-12

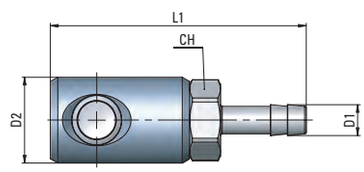
Innesto rapido con filetto femmina | Female coupling | Coupleur femelle | Aufschraubkupplung



Type	D1	D2	L1	L2	CH	g
12 00 14	G1/4	25	9	59.6	21	97,4
12 00 38	G3/8	25	10	61.6	21	97,5
12 00 12	G1/2	25	11	63.6	24	116,6

GU 41-13

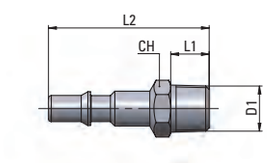
Innesto rapido con portagomma | Coupling with hose connection | Coupleur avec douille cannelée | Kupplung mit Schlauchtülle



Type	Øi Tubo	D1	D2	L2	CH	g
13 06 00	6	7	25	74.6	21	82,5
13 08 00	8	9	25	74.6	21	86,3
13 10 00	10	11	25	74.6	21	87

GU 41-20

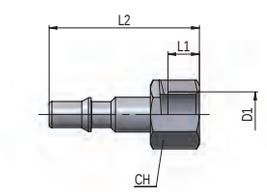
Innesto con filetto maschio | Male plug | Embout mâle | Einschraubverschlußnippel



Type	D1	L1	L2	CH	g
20 00 14	R1/4	11	46	14	18
20 00 38	R3/8	11,5	46,5	17	23,4
20 00 12	R1/2	14	49	22	36,5

GU 41-21

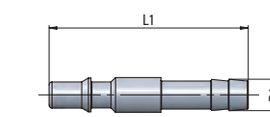
Innesto con filetto femmina | Female plug | Embout femelle | Aufschraubverschlußnippel



Type	D1	L1	L2	CH	g
21 00 14	G1/4	9.5	43	17	23
21 00 38	G3/8	10.5	45	20	29
21 00 12	G1/2	11	47	24	41

GU 41-22

Innesto con portagomma | Plug with hose connection | Embout avec douille cannelée | Schlauchtülle



Type	Øi Tubo	D1	L1	g
22 06 00	6	7	57	12,3
22 08 00	8	9	57	14,7
22 10 00	10	11	57	20,5

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GU 42

Innesto rapido a pulsante con dispositivo di sicurezza per profili ISO 6150 B-12

Push-button safety coupling according to ISO 6150 B-12

Coupleur securite a bouton selon profil ISO 6150 B-12

Sicherheitskupplung mit Knopf gemäss ISO 6150 B-12 profil

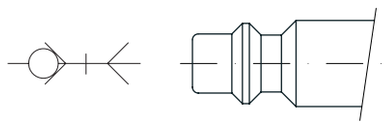
1	2	3	4	5	6	
Corpo Body Corps Körper	Pulsante, Otturatore e ghiera di scarico Button, Valve and Venting ring Bouton, Clapet et Bague d'échappement Knopf, Ventil und Entlueftungsring	Vite Thread Filet Gewindstück	Molle Springs Ressorts Feder	Sfere Balls Billes Kugel	Guarnizioni Seals Joint d'étanchéité Dichtung	Innesti Plugs Embouts Stecker
Alluminio Anodizzato Al2011 Anodised Aluminium Al2011 Aluminium anodisé Al2011 Eloxiertes Aluminium Al2011	Acciao Indurito e zincato 11SMnPb37 Hardened, zinc plated steel 11SMnPb37 Acier trempé et zingué 11SMnPb37 Stahl gehärtet und verzinkt 11SMnPb37	Ottone nichelato UNI EN 12164 CW614N Brass nickel plated UNI EN 12164 CW614N Laiton nickelé UNI EN 12164 CW614N Messing vernickelt UNI EN 12164 CW614N	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	Acciaio Inox AISI 420 Stainless Steel AISI 420 Acier Inox AISI 420 Edelstahl AISI 420	NBR NBR NBR NBR	Acciao Indurito e zincato 11SMnPb37 Hardened, zinc plated steel 11SMnPb37 Acier trempé et zingué 11SMnPb37 Stahl gehärtet und verzinkt 11SMnPb37

-20°C ÷ 80°C

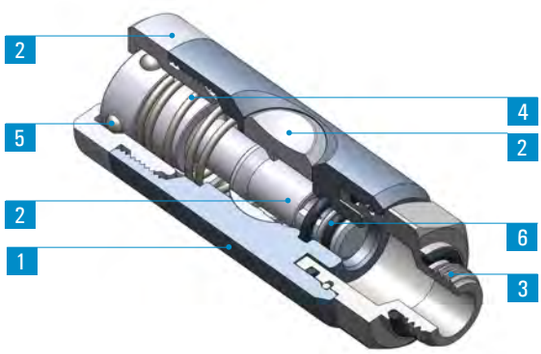
0 ÷16 bar

5,5 mm

780 Nl/min
(6 bar · Δp = 1bar)



Profilo ISO 6150 B-12
ISO 6150 B-12 Profile
Profil ISO 6150 B-12
ISO 6150 B-12 Profil



L'Innesto Rapido rimane orientabile anche dopo l'installazione.
The Coupling will remain swivelling after installation.
Le coupleur peut être orienté après le montage.
Die Kupplung bleibt nach der Montage drehbar.

CONNESSIONE - DISCONNESSIONE

Inserire semplicemente l'innesto nel corpo.

Per la disconnessione dell'innesto dal corpo femmina è necessario seguire 2 semplici fasi:
L'innesto è inserito nel corpo femmina
Fase 1:
Premere il pulsante di sgancio permettendo così lo scarico dell'aria del circuito a valle; l'innesto in questa fase è ancora trattenuto all'interno del corpo femmina.
Fase 2:
Premere nuovamente il pulsante per rimuovere l'innesto dal corpo femmina.

CONNECTION - TO RELEASE

Insert the plug into the Coupling

To disconnect the plug follow instructions below:
Plug inserted in Coupling
Step 1:
Press the button once to vent the downstream air from the circuit; at this time the plug is still captive in the Coupling.
Step 2:
Press the button one more time to release the plug.

CONNEXION - DECONNEXION

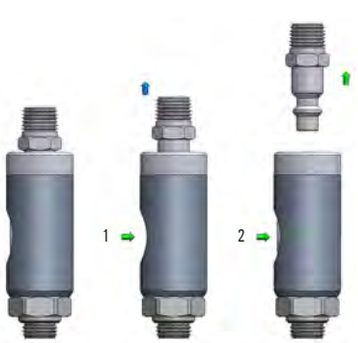
Insérer l'embout dans le coupleur pour accoupler les deux composants

Pour sortir l'embout suivre les indications ci-dessous:
Embout inséré dans le coupleur
Phase 1:
Appuyer sur le bouton pour que la pression s'échappe du circuit. L'embout reste cependant encore dans le coupleur.
Phase 2:
Pour déconnecter l'embout, appuyer une deuxième fois sur le bouton.

ZUM KUPPELN - ZUM ENTKUPPELN

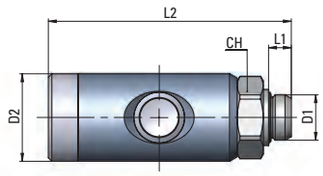
Stecker in die Kupplung einstecken

Zum Entkuppeln, den folgen den Anweisungen folgen:
Der Stecker ist gekuppelt
Phase 1:
Auf dem Knopf einmal drücken. Dadurch wird die Anlage entlüftet dennoch bleibt der Stecker in der Kupplung gesichert.
Phase 2:
Erst bei einem zweiten Drücken auf dem Knopf wird der Stecker gelöst.



GU 42-10

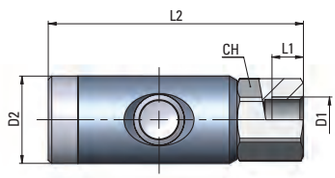
Innesto rapido con filetto maschio | Male coupling | Coupleur mâle | Einschraubkupplung



Type	D1	D2	L1	L2	CH	g
10 00 14	**G1/4**	25	6,5	69,5	21	115
10 00 38	**G3/8**	25	7	69,5	21	108
10 00 12	**G1/2**	25	8,5	72	25	137,2

GU 42-12

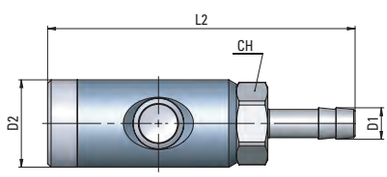
Innesto rapido con filetto femmina | Female coupling | Coupleur femelle | Aufschraubkupplung



Type	D1	D2	L1	L2	CH	g
12 00 14	**G1/4**	25	9	73	21	134,5
12 00 38	**G3/8**	25	10	75	21	131
12 00 12	**G1/2**	25	11	77	24	139

GU 42-13

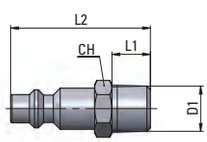
Innesto rapido con portagomma | Coupling with hose connection | Coupleur avec douille cannelée | Kupplung mit Schlauchtülle



Type	Øi Tubo	D1	D2	L2	CH	g
13 06 00	**6**	7	25	88	21	106,2
13 08 00	**8**	9	25	88	21	108
13 10 00	**10**	11	25	88	21	109,7

GU 42-20

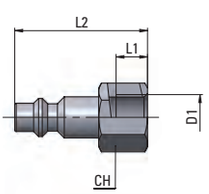
Innesto con filetto maschio | Male plug | Embout mâle | Einschraubverschlußnippel



Type	D1	L1	L2	CH	g
20 00 14	**R1/4**	11	40	14	20
20 00 38	**R3/8**	11,5	41,5	17	26
20 00 12	**R1/2**	14	44	22	40

GU 42-21

Innesto con filetto femmina | Female plug | Embout femelle | Aufschraubverschlußnippel



Type	D1	L1	L2	CH	g
21 00 14	**G1/4**	9.5	38	17	25
21 00 38	**G3/8**	10.5	40	20	31,5
21 00 12	**G1/2**	11	42	24	43,5

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GU 43

Innesto rapido a pulsante con dispositivo di sicurezza per profili ISO 6150 C-14

Push-button safety coupling according to ISO 6150 C-14

Coupleur securite a bouton selon profil ISO 6150 C-14

Sicherheitskupplung mit Knopf gemäss ISO 6150 C-14 profil

1	2	3	4	5	6	
Corpo Body Corps Körper	Otturatore Valve Clapet Ventil	Vite Thread Filet Gewindstück	Pulsante Button Bouton Knopf	Guarnizioni Seals Joint d'étanchéité Dichtung	Molle Springs Ressorts Feder	Innesti Plugs Embouts Stecker
Alluminio Anodizzato Al2011 Anodised Aluminium Al2011 Aluminium anodisé Al2011 Eloxiertes Aluminium Al2011	Ottone UNI EN 12164 CW614N Brass UNI EN 12164 CW614N Laiton UNI EN 12164 CW614N Messing UNI EN 12164 CW614N	Ottone nichelato UNI EN 12164 CW614N Brass nickel plated UNI EN 12164 CW614N Laiton nickelé UNI EN 12164 CW614N Messing vernickelt UNI EN 12164 CW614N	Acciao Indurito e zincato 11SMnPb37 Hardened, zinc plated steel 11SMnPb37 Acier trempé et zingué 11SMnPb37 Stahl gehärtet und verzinkt 11SMnPb37	NBR NBR NBR NBR	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	Acciao Indurito e zincato 11SMnPb37 Hardened, zinc plated steel 11SMnPb37 Acier trempé et zingué 11SMnPb37 Stahl gehärtet und verzinkt 11SMnPb37

-20°C ÷ 80°C

0 ÷ 10 bar

8 mm

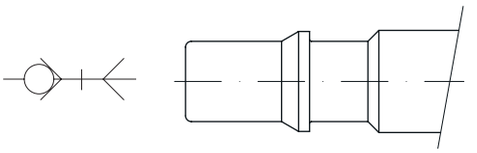
1460 Nl/min
(6 bar - Δp = 1bar)

ISO 4414

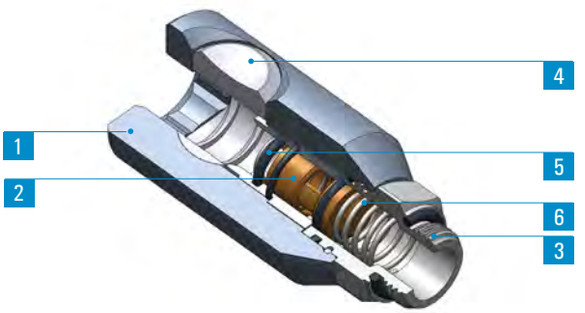
SILICONE FREE

RoHS COMPLIANT

REACH COMPLIANT



Profilo ISO 6150 C-14
ISO 6150 C-14 Profile
Profil ISO 6150 C-14
ISO 6150 C-14 Profil



L'Innesto Rapido rimane orientabile anche dopo l'installazione.
The Coupling will remain swivelling after installation.
Le coupleur peut être orienté après le montage.
Die Kupplung bleibt nach der Montage drehbar.

CONNESSIONE - DISCONNESSIONE

Inserire semplicemente l'innesto nel corpo.

Per la disconnessione dell'innesto dal corpo femmina è necessario seguire 2 semplici fasi:
L'innesto è inserito nel corpo femmina
Fase 1:
Premere il pulsante di sgancio permettendo così lo scarico dell'aria del circuito a valle; l'innesto in questa fase è ancora trattenuto all'interno del corpo femmina.
Fase 2:
Premere nuovamente il pulsante per rimuovere l'innesto dal corpo femmina.

CONNECTION - TO RELEASE

Insert the plug into the Coupling

To disconnect the plug follow instructions below:
Plug inserted in Coupling
Step 1:
Press the button once to vent the downstream air from the circuit; at this time the plug is still captive in the Coupling.
Step 2:
Press the button one more time to release the plug.

CONNEXION - DECONNEXION

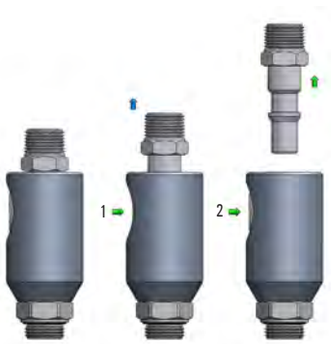
Insérer l'embout dans le coupleur pour accoupler les deux composants

Pour sortir l'embout suivre les indications ci-dessous:
Embout inséré dans le coupleur
Phase 1:
Appuyer sur le bouton pour que la pression s'échappe du circuit. L'embout reste cependant encore dans le coupleur.
Phase 2:
Pour déconnecter l'embout, appuyer une deuxième fois sur le bouton.

ZUM KUPPELN - ZUM ENTKUPPELN

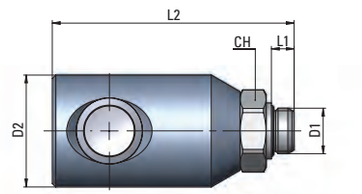
Stecker in die Kupplung einstecken

Zum Entkuppeln, den folgen den Anweisungen folgen:
Der Stecker ist gekuppelt
Phase 1:
Auf dem Knopf einmal drücken. Dadurch wird die Anlage entlüftet dennoch bleibt der Stecker in der Kupplung gesichert.
Phase 2:
Erst bei einem zweiten Drücken auf dem Knopf wird der Stecker gelöst.



GU 43-10

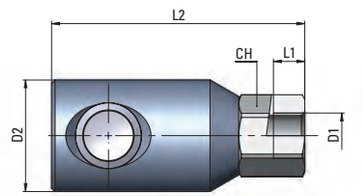
Innesto rapido con filetto maschio | Male coupling | Coupleur mâle | Einschraubkupplung



Type	D1	D2	L1	L2	CH	g
10 00 14	G1/4	32	6,5	69.2	21	144,7
10 00 38	G3/8	32	7	69.2	21	150
10 00 12	G1/2	32	8,5	71.7	25	173,5

GU 43-12

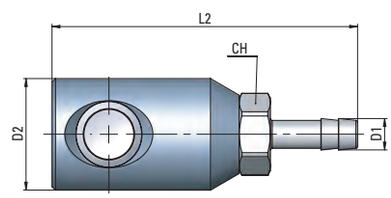
Innesto rapido con filetto femmina | Female coupling | Coupleur femelle | Aufschraubkupplung



Type	D1	D2	L1	L2	CH	g
12 00 14	G1/4	32	9	72.7	21	167,6
12 00 38	G3/8	32	10	75	21	163,7
12 00 12	G1/2	32	11	77	24	176,3

GU 43-13

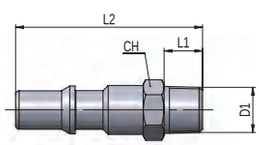
Innesto rapido con portagomma | Coupling with hose connection | Coupleur avec douille cannelée | Kupplung mit Schlauchtülle



Type	Øi Tubo	D1	D2	L2	CH	g
13 08 00	8	9	32	88	21	148,3
13 10 00	10	11	32	88	21	149,8
13 13 00	13	14	32	88	21	154,9

GU 43-20

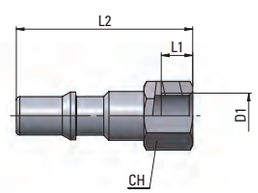
Innesto con filetto maschio | Male plug | Embout mâle | Einschraubverschlußnippel



Type	D1	L1	L2	CH	g
20 00 14	R1/4	11	46	14	32
20 00 38	R3/8	11,5	46,5	17	35,5
20 00 12	R1/2	14	49	22	51

GU 43-21

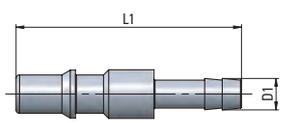
Innesto con filetto femmina | Female plug | Embout femelle | Aufschraubverschlußnippel



Type	D1	L1	L2	CH	g
21 00 14	G1/4	9.5	50,5	17	35
21 00 38	G3/8	10.5	52,5	20	42
21 00 12	G1/2	11	54,5	24	53

GU 43-22

Innesto con portagomma | Plug with hose connection | Embout avec douille cannelée | Schlauchtülle



Type	Øi Tubo	D1	L1	g
22 08 00	8	9	64,5	26,5
22 10 00	10	11	64,5	27
22 13 00	13	14	64,5	39

GU 44

Innesto rapido a pulsante con dispositivo di sicurezza per profilo ISO 6150 B-15 | Push-button safety coupling according to ISO 6150 B-15 | Coupleur securite a bouton selon profil ISO 6150 B-15 | Sicherheitskupplung mit Knopf gemäss ISO 6150 B-15 profil

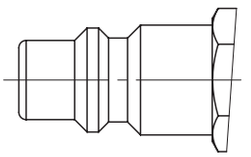
1	2	3	4	5	6	
Corpo Body Corps Körper	Pulsante, Otturatore e ghiera di scarico Button, Valve and Venting ring Bouton, Clapet et Bague d'échappement Knopf, Ventil und Entlueftungsring	Vite Thread Filet Gewindstück	Molle Springs Ressorts Feder	Sfere Balls Billes Kugel	Guarnizioni Seals Joint d'étanchéité Dichtung	Innesti Plugs Embouts Stecker
Alluminio Anodizzato Al2011 Anodised Aluminium Al2011 Aluminium anodisé Al2011 Eloxiertes Aluminium Al2011	Acciao Indurito e zincato 11SMnPb37 Hardened, zinc plated steel 11SMnPb37 Acier trempé et zingué 11SMnPb37 Stahl gehärtet und verzinkt 11SMnPb37	Ottone nichelato UNI EN 12164 CW614N Brass nickel plated UNI EN 12164 CW614N Laiton nickelé UNI EN 12164 CW614N Messing vernickelt UNI EN 12164 CW614N	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	Acciaio Inox AISI 420 Stainless Steel AISI 420 Acier Inox AISI 420 Edelstahl AISI 420	NBR NBR NBR NBR	Acciao Indurito e zincato 11SMnPb37 Hardened, zinc plated steel 11SMnPb37 Acier trempé et zingué 11SMnPb37 Stahl gehärtet und verzinkt 11SMnPb37

-20°C ÷ 80°C

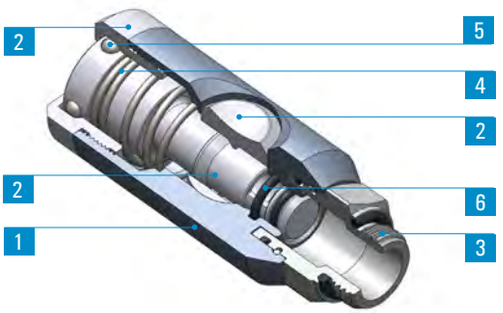
0 ÷ 12 bar

8 mm

1650 Nl/min
(6 bar - Δp = 1bar)

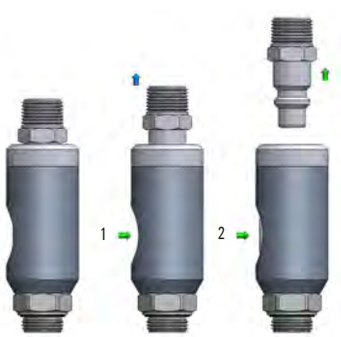


Profilo ISO 6150 B-15
ISO 6150 B-15 Profile
Profil ISO 6150 B-15
ISO 6150 B-15 Profil



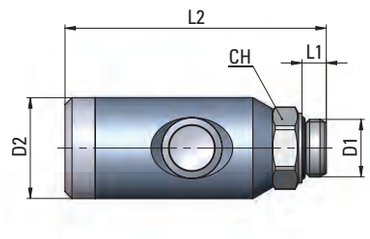
L'Innesto Rapido rimane orientabile anche dopo l'installazione.
The Coupling will remain swivelling after installation.
Le coupleur peut être orienté après le montage.
Die Kupplung bleibt nach der Montage drehbar.

CONNESSIONE - DISCONNESSIONE	CONNECTION - TO RELEASE	CONNEXION - DECONNEXION	ZUM KUPPELN - ZUM ENTKUPPELN
Inserire semplicemente l'innesto nel corpo.	Insert the plug into the Coupling	Insérer l'embout dans le coupleur pour accoupler les deux composants	Stecker in die Kupplung einstecken
Per la disconnessione dell'innesto dal corpo femmina è necessario seguire 2 semplici fasi: L'innesto è inserito nel corpo femmina Fase 1: Premere il pulsante di sgancio permettendo così lo scarico dell'aria del circuito a valle; l'innesto in questa fase è ancora trattenuto all'interno del corpo femmina. Fase 2: Premere nuovamente il pulsante per rimuovere l'innesto dal corpo femmina.	To disconnect the plug follow instructions below: Plug inserted in Coupling Step 1: Press the button once to vent the downstream air from the circuit; at this time the plug is still captive in the Coupling. Step 2: Press the button one more time to release the plug.	Pour sortir l'embout suivre les indications ci-dessous: Embout inséré dans le coupleur Phase 1: Appuyer sur le bouton pour que la pression s'échappe du circuit. L'embout reste cependant encore dans le coupleur. Phase 2: Pour déconnecter l'embout, appuyer une deuxième fois sur le bouton.	Zum Entkuppeln, den folgen den Anweisungen folgen: Der Stecker ist gekuppelt Phase 1: Auf dem Knopf einmal drücken. Dadurch wird die Anlage entlüftet dennoch bleibt der Stecker in der Kupplung gesichert. Phase 2: Erst bei einem zweiten Drücken auf dem Knopf wird der Stecker gelöst.



GU 44-10

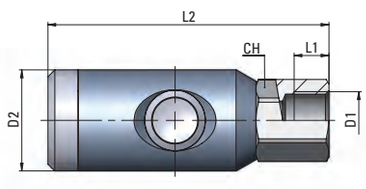
Innesto Rapido con filetto maschio | Male coupling | Coupleur mâle | Einschraubkupplung



Type	D1	D2	L1	L2	CH	g
10 00 38	G3/8	29	7	75.2	21	148,7
10 00 12	G1/2	29	8,5	77.7	25	170

GU 44-12

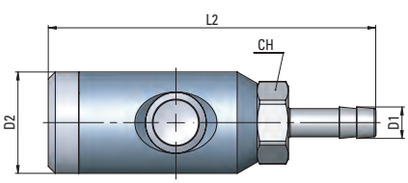
Innesto rapido con filetto femmina | Female coupling | Coupleur femelle | Aufschraubkupplung



Type	D1	D2	L1	L2	CH	g
12 00 38	G3/8	29	10	80.7	21	163,1
12 00 12	G1/2	29	11	82.7	24	175,4

GU 44-13

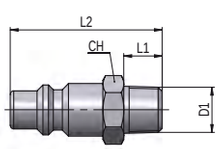
Innesto rapido con portagomma | Coupling with hose connection | Coupleur avec douille cannelée | Kupplung mit Schlauchtülle



Type	Øi Tubo	D1	D2	L2	CH	g
13 08 00	8	9	29	93.7	21	152,9
13 10 00	10	11	29	93.7	21	154
13 13 00	13	14	29	93.7	21	160

GU 44-20

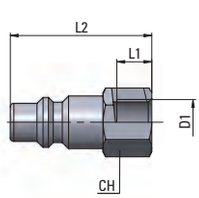
Innesto con filetto maschio | Male plug | Embout mâle | Einschraubverschlußnippel



Type	D1	L1	L2	CH	g
20 00 14	R1/4	11	43,5	17	32,3
20 00 38	R3/8	11,5	44	17	32,9
20 00 12	R1/2	14	46,5	22	47

GU 44-21

Innesto con filetto femmina | Female plug | Embout femelle | Aufschraubverschlußnippel



Type	D1	D2	L1	CH	g
21 00 14	G1/4	9.5	40,5	17	32,5
21 00 38	G3/8	10.5	42,5	20	38,3
21 00 12	G1/2	11	44,5	24	51,3

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GU 45

Innesto rapido a pulsante con dispositivo di sicurezza per profilo ARO 210 | Push-button safety coupling according to ARO 210 | Coupleur securite a bouton selon profil ARO 210 | Sicherheitskupplung mit Knopf gemäss ARO 210 profil

1	2	3	4	5	6	
Corpo Body Corps Körper	Pulsante, Otturatore e ghiera di scarico Button, Valve and Venting ring Bouton, Clapet et Bague d'échappement Knopf, Ventil und Entlueftungsring	Vite Thread Filet Gewindstück	Molle Springs Ressorts Feder	Sfere Balls Billes Kugel	Guarnizioni Seals Joint d'étanchéité Dichtung	Innesti Plugs Embouts Stecker
Alluminio Anodizzato Al2011 Anodised Aluminium Al2011 Aluminium anodisé Al2011 Eloxiertes Aluminium Al2011	Acciao Indurito e zincato 11SMnPb37 Hardened, zinc plated steel 11SMnPb37 Acier trempé et zingué 11SMnPb37 Stahl gehärtet und verzinkt 11SMnPb37	Ottone nichelato UNI EN 12164 CW614N Brass nickel plated UNI EN 12164 CW614N Laiton nickelé UNI EN 12164 CW614N Messing vernickelt UNI EN 12164 CW614N	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	Acciaio Inox AISI 420 Stainless Steel AISI 420 Acier Inox AISI 420 Edelstahl AISI 420	NBR NBR NBR NBR	Acciaio Nichelato 11SMnPb37 Nickel plated steel 11SMnPb37 Acier Nickelé 11SMnPb37 Stahl Vernickelt 11SMnPb37

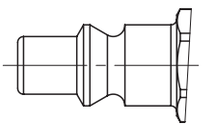
-20°C ÷ 80°C

0 ÷ 12 bar

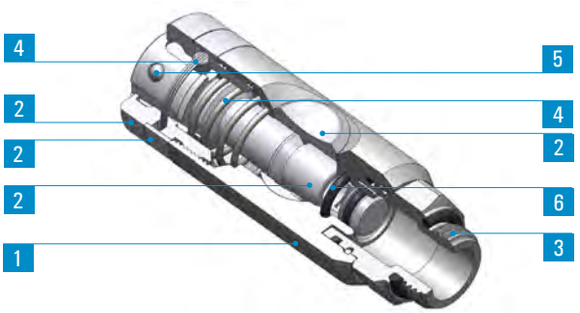
5,5 mm

1080 Nl/min
(6 bar · Δp = 1bar)

ISO 4414



Profilo ARO 210
ARO 210 Profile
Profil ARO 210
ARO 210 Profil

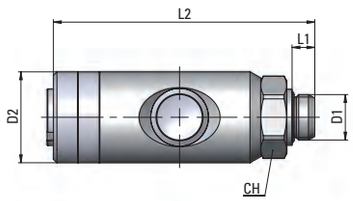


L'Innesto Rapido rimane orientabile anche dopo l'installazione.
The Coupling will remain swivelling after installation.
Le coupleur peut être orienté après le montage.
Die Kupplung bleibt nach der Montage drehbar.

CONNESSIONE - DISCONNESSIONE	CONNECTION - TO RELEASE	CONNEXION - DECONNEXION	ZUM KUPPELN - ZUM ENTKUPPELN
Inserire semplicemente l'innesto nel corpo.	Insert the plug into the Coupling	Insérer l'embout dans le coupleur pour accoupler les deux composants	Stecker in die Kupplung einstecken
Per la disconnessione dell'innesto dal corpo femmina è necessario seguire 2 semplici fasi: L'innesto è inserito nel corpo femmina Fase 1: Premere il pulsante di sgancio permettendo così lo scarico dell'aria del circuito a valle; l'innesto in questa fase è ancora trattenuto all'interno del corpo femmina. Fase 2: Premere nuovamente il pulsante per rimuovere l'innesto dal corpo femmina.	To disconnect the plug follow instructions below: Plug inserted in Coupling Step 1: Press the button once to vent the downstream air from the circuit; at this time the plug is still captive in the Coupling. Step 2: Press the button one more time to release the plug.	Pour sortir l'embout suivre les indications ci-dessous: Embout inséré dans le coupleur Phase 1: Appuyer sur le bouton pour que la pression s'échappe du circuit. L'embout reste cependant encore dans le coupleur. Phase 2: Pour déconnecter l'embout, appuyer une deuxième fois sur le bouton.	Zum Entkuppeln, den folgen den Anweisungen folgen: Der Stecker ist gekuppelt Phase 1: Auf dem Knopf einmal drücken. Dadurch wird die Anlage entlüftet dennoch bleibt der Stecker in der Kupplung gesichert. Phase 2: Erst bei einem zweiten Drücken auf dem Knopf wird der Stecker gelöst.

GU 45-10

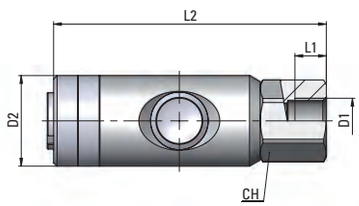
Innesto rapido con filetto maschio | Male coupling | Coupleur mâle | Einschraubkupplung



Type	D1	D2	L1	L2	CH	g
10 00 14	G1/4	26	6,5	74.8	21	139,4
10 00 38	G3/8	26	7	74.8	21	140,7
10 00 12	G1/2	26	8,5	77.3	25	161,9

GU 45-12

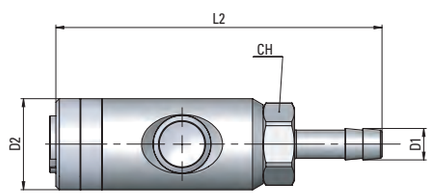
Innesto rapido con filetto femmina | Female coupling | Coupleur femelle | Aufschraubkupplung



Type	D1	D2	L1	L2	CH	g
12 00 14	G1/4	26	9	78.3	21	162,5
12 00 38	G3/8	26	10	80.3	21	156,4
12 00 12	G1/2	26	11	82.3	24	166,6

GU 45-13

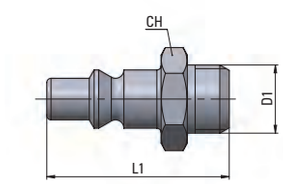
Innesto rapido con portagomma | Coupling with hose connection | Coupleur avec douille cannelée | Kupplung mit Schlauchtülle



Type	Øi Tubo	D1	D2	L2	CH	g
13 06 00	6	7	26	93.3	21	142,1
13 08 00	8	9	26	93.3	21	144,2
13 09 00	9	10	26	93.3	21	145,3
13 10 00	10	11	26	93.3	21	146,1
13 13 00	13	14	26	93.3	21	153

GU 45-20

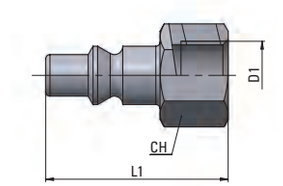
Innesto con filetto maschio | Male plug | Embout mâle | Einschraubverschlußnippel



Type	D1	L1	CH	g
20 00 14	G1/4	36	14	17,1
20 00 38	G3/8	40	17	23,5
20 00 12	G1/2	39,5	24	41,3

GU 45-21

Innesto con filetto femmina | Female plug | Embout femelle | Aufschraubverschlußnippel



Type	D1	L1	CH	g
21 00 14	G1/4	37	16	19
21 00 38	G3/8	40	19	25,3
21 00 12	G1/2	43,5	25	50,4

GU 46

Innesto rapido a pulsante con dispositivo di sicurezza per profilo europeo
Push-button safety coupling according european profile
Coupleur securite a bouton selon profil européen
Sicherheitskupplung mit Knopf gemäss europäisches profil

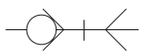
1	2	3	4	5	6	
Corpo Body Corps Körper	Pulsante, Otturatore e ghiera di scarico Button, Valve and Venting ring Bouton, Clapet et Bague d'échappement Knopf, Ventil und Entlueftungsring	Vite Thread Filet Gewindstück	Molle Springs Ressorts Feder	Sfere Balls Billes Kugel	Guarnizioni Seals Joint d'étanchéité Dichtung	Innesti Plugs Embouts Stecker
Alluminio Anodizzato Al2011 Anodised Aluminium Al2011 Aluminium anodisé Al2011 Eloxiertes Aluminium Al2011	Acciao Indurito e zincato 11SMnPb37 Hardened, zinc plated steel 11SMnPb37 Acier trempé et zingué 11SMnPb37 Stahl gehärtet und verzinkt 11SMnPb37	Ottone nichelato UNI EN 12164 CW614N Brass nickel plated UNI EN 12164 CW614N Laiton nickelé UNI EN 12164 CW614N Messing vernickelt UNI EN 12164 CW614N	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	Acciaio Inox AISI 420 Stainless Steel AISI 420 Acier Inox AISI 420 Edelstahl AISI 420	NBR NBR NBR NBR	Acciao Indurito e zincato 11SMnPb37 Hardened, zinc plated steel 11SMnPb37 Acier trempé et zingué 11SMnPb37 Stahl gehärtet und verzinkt 11SMnPb37

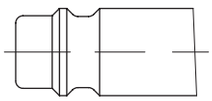
-20°C ÷ 80°C

0 ÷ 12 bar

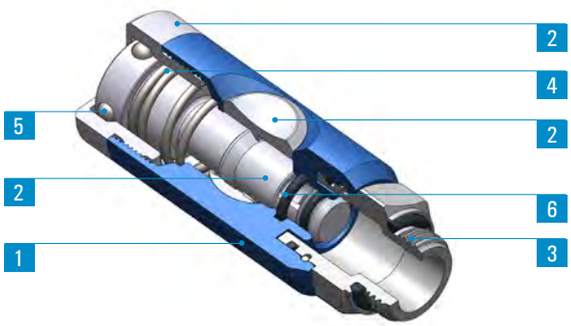
7,4 mm

1500 Nl/min
(6 bar - Δp = 1bar)





Profilo Europeo
European Profile
Profil européen
Europäisches Profil

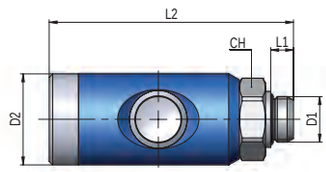


L'Innesto Rapido rimane orientabile anche dopo l'installazione.
The Coupling will remain swivelling after installation.
Le coupleur peut être orienté après le montage.
Die Kupplung bleibt nach der Montage drehbar.

CONNESSIONE - DISCONNESSIONE	CONNECTION - TO RELEASE	CONNEXION - DECONNEXION	ZUM KUPPELN - ZUM ENTKUPPELN
Inserire semplicemente l'innesto nel corpo.	Insert the plug into the Coupling	Insérer l'embout dans le coupleur pour accoupler les deux composants	Stecker in die Kupplung einstecken
Per la disconnessione dell'innesto dal corpo femmina è necessario seguire 2 semplici fasi: L'innesto è inserito nel corpo femmina Fase 1: Premere il pulsante di sgancio permettendo così lo scarico dell'aria del circuito a valle; l'innesto in questa fase è ancora trattenuto all'interno del corpo femmina. Fase 2: Premere nuovamente il pulsante per rimuovere l'innesto dal corpo femmina.	To disconnect the plug follow instructions below: Plug inserted in Coupling Step 1: Press the button once to vent the downstream air from the circuit; at this time the plug is still captive in the Coupling. Step 2: Press the button one more time to release the plug.	Pour sortir l'embout suivre les indications ci-dessous: Embout inséré dans le coupleur Phase 1: Appuyer sur le bouton pour que la pression s'échappe du circuit. L'embout reste cependant encore dans le coupleur. Phase 2: Pour déconnecter l'embout, appuyer une deuxième fois sur le bouton.	Zum Entkuppeln, den folgen den Anweisungen folgen: Der Stecker ist gekuppelt Phase 1: Auf dem Knopf einmal drücken. Dadurch wird die Anlage entlüftet dennoch bleibt der Stecker in der Kupplung gesichert. Phase 2: Erst bei einem zweiten Drücken auf dem Knopf wird der Stecker gelöst.

GU 46-10

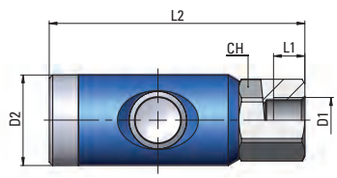
Innesto rapido con filetto maschio | Male Coupling | Coupleur mâle | Einschraubkupplung



Type	D1	D2	L1	L2	CH	g
10 00 14	**G1/4**	26	6,5	69.9	21	124
10 00 38	**G3/8**	26	7	69.9	21	125,1
10 00 12	**G1/2**	26	8,5	72.4	25	144,5

GU 46-12

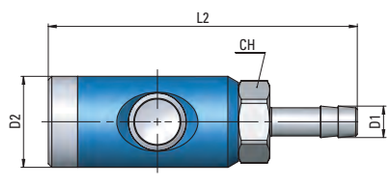
Innesto rapido con filetto femmina | Female coupling | Coupleur femelle | Aufschraubkupplung



Type	D1	D2	L1	L2	CH	g
12 00 14	**G1/4**	26	9	73.4	21	144,1
12 00 38	**G3/8**	26	10	75.4	21	140
12 00 12	**G1/2**	26	11	77.4	24	150,8

GU 46-13

Innesto rapido con portagomma | Coupling with hose connection | Coupleur avec douille cannelée | Kupplung mit Schlauchtülle



Type	Ø Tubo	D1	D2	L2	CH	g
13 06 00	**6**	7	26	88.4	21	128
13 08 00	**8**	9	26	88.4	21	129,4
13 09 00	**9**	10	26	88.4	21	130,6
13 10 00	**10**	11	26	88.4	21	130
13 13 00	**13**	14	26	88.4	21	137,8

Per gli Innesti da utilizzare si veda la relativa sezione della **serie GU26**.
For further info on the plugs to use, please revert to the **GU26 section**.
Pour autres renseignements concernants les embouts à utiliser, voir la **section des GU26.**
Bei weiteren Auskünften über die einsetzbaren Stecker, bitte sich auf den Abschnitt über **GU26** beziehen.

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PU Safety

cmatic®
PNEUMATIC FITTINGS

Innesti Rapidi di Sicurezza NPT
Safety Couplings, NPT
Coupleurs de Sécurité, NPT
Sicherheitskupplungen, NPT

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PU 42

Innesto rapido a pulsante con dispositivo di sicurezza per profili ISO 6150 B-12

Push-button safety coupling according to ISO 6150 B-12

Coupleur securite a bouton selon profil ISO 6150 B-12

Sicherheitskupplung mit Knopf gemäss ISO 6150 B-12 profil

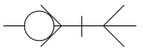
1	2	3	4	5	6	
Corpo Body Corps Körper	Pulsante, Otturatore e ghiera di scarico Button, Valve and Venting ring Bouton, Clapet et Bague d'échappement Knopf, Ventil und Entlueftungsring	Vite Thread Filet Gewindstück	Molle Springs Ressorts Feder	Sfere Balls Billes Kugel	Guarnizioni Seals Joint d'étanchéité Dichtung	Innesti Plugs Embouts Stecker
Alluminio Anodizzato Al2011 Anodised Aluminium Al2011 Aluminium anodisé Al2011 Eloxiertes Aluminium Al2011	Acciao Indurito e zincato 11SMnPb37 Hardened, zinc plated steel 11SMnPb37 Acier trempé et zingué 11SMnPb37 Stahl gehärtet und verzinkt 11SMnPb37	Ottone nichelato UNI EN 12164 CW614N Brass nickel plated UNI EN 12164 CW614N Laiton nickelé UNI EN 12164 CW614N Messing vernickelt UNI EN 12164 CW614N	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	Acciaio Inox AISI 420 Stainless Steel AISI 420 Acier Inox AISI 420 Edelstahl AISI 420	NBR NBR NBR NBR	Acciao Indurito e zincato 11SMnPb37 Hardened, zinc plated steel 11SMnPb37 Acier trempé et zingué 11SMnPb37 Stahl gehärtet und verzinkt 11SMnPb37

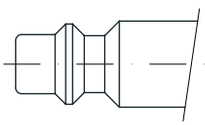
-20°C ÷ 80°C

0 ÷16 bar

5,5 mm

780 Nl/min
(6 bar · Δp = 1bar)





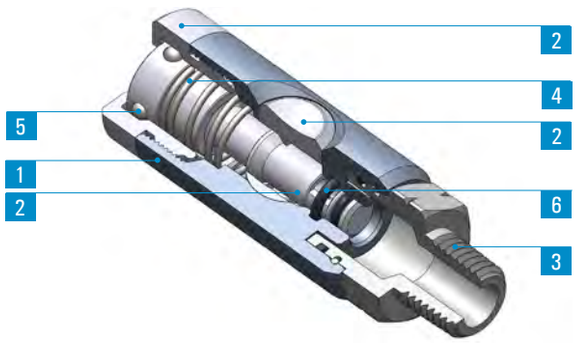
INDUSTRIAL Profile
MIL C4109 Profile
ISO 6150 B-12 Profile

ISO 4414

SILICONE FREE

RoHS COMPLIANT

REACH COMPLIANT



L'Innesto Rapido rimane orientabile anche dopo l'installazione.
The Coupling will remain swivelling after installation.
Le coupleur peut être orienté après le montage.
Die Kupplung bleibt nach der Montage drehbar.

CONNESSIONE - DISCONNESSIONE

Inserire semplicemente l'innesto nel corpo.

Per la disconnessione dell'innesto dal corpo femmina è necessario seguire 2 semplici fasi:
L'innesto è inserito nel corpo femmina
Fase 1:
Premere il pulsante di sgancio permettendo così lo scarico dell'aria del circuito a valle; l'innesto in questa fase è ancora trattenuto all'interno del corpo femmina.
Fase 2:
Premere nuovamente il pulsante per rimuovere l'innesto dal corpo femmina.

CONNECTION - TO RELEASE

Insert the plug into the Coupling

To disconnect the plug follow instructions below:
Plug inserted in Coupling
Step 1:
Press the button once to vent the downstream air from the circuit; at this time the plug is still captive in the Coupling.
Step 2:
Press the button one more time to release the plug.

CONNEXION - DECONNEXION

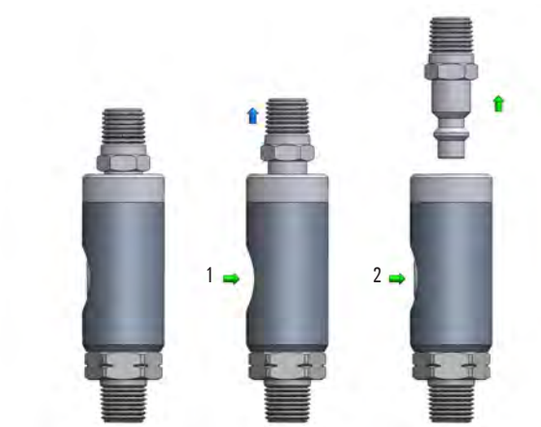
Insérer l'embout dans le coupleur pour accoupler les deux composants

Pour sortir l'embout suivre les indications ci-dessous:
Embout inséré dans le coupleur
Phase 1:
Appuyer sur le bouton pour que la pression s'échappe du circuit. L'embout reste cependant encore dans le coupleur.
Phase 2:
Pour déconnecter l'embout, appuyer une deuxième fois sur le bouton.

ZUM KUPPELN - ZUM ENTKUPPELN

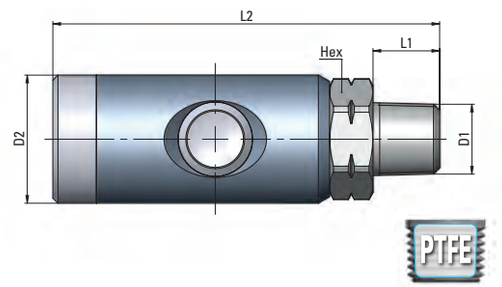
Stecker in die Kupplung einstecken

Zum Entkuppeln, den folgen den Anweisungen folgen:
Der Stecker ist gekuppelt
Phase 1:
Auf dem Knopf einmal drücken. Dadurch wird die Anlage entlüftet dennoch bleibt der Stecker in der Kupplung gesichert.
Phase 2:
Erst bei einem zweiten Drücken auf dem Knopf wird der Stecker gelöst.



PU 42-11

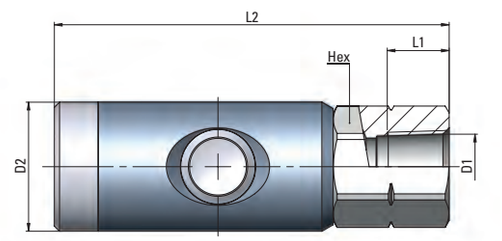
Innesto rapido con filetto maschio | Male coupling | Coupleur mâle | Einschraubkupplung



Type	D1 NPTF	D2	L1	L2	HEX	g
11 00 1/4	1/4	25	13	75,5	21	110,1
11 00 3/8	3/8	25	13	74,5	21	120,3
11 00 1/2	1/2	25	17	78,5	22	141,6

PU 42-12

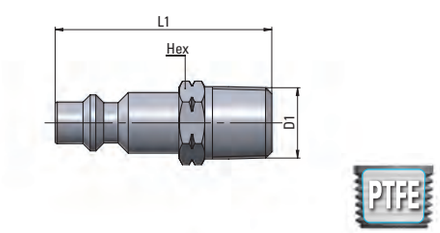
Innesto rapido con filetto femmina | Female coupling | Coupleur femelle | Aufschraubkupplung



Type	D1 NPTF	D2	L1	L2	HEX	g
12 00 1/4	1/4	25	12	76,5	21	127,6
12 00 3/8	3/8	25	12,5	77	21	118
12 00 1/2	1/2	25	13,5	79	24	140

PU 42-20

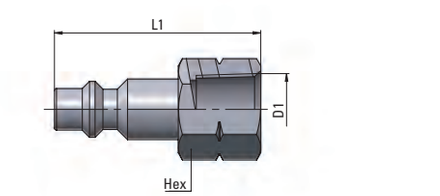
Innesto con filetto maschio | Male plug | Embout mâle | Einschraubverschlußnippel



Type	D1 NPTF	L1	CH	g
20 00 1/4	1/4	42	14	22,6
20 00 3/8	3/8	42	18	28,9
20 00 1/2	1/2	47	22	43,1

PU 42-21

Innesto con filetto femmina | Female plug | Embout femelle | Aufschraubverschlußnippel



Type	D1 NPTF	L1	CH	g
21 00 1/4	1/4	40	17	28,1
21 00 3/8	3/8	40	20	31,6
21 00 1/2	1/2	44	24	50

PU 44

Innesto rapido a pulsante con dispositivo di sicurezza per profilo ISO 6150 B-15

Push-Button safety coupling according to ISO 6150 B-15

Coupleur securite a bouton selon profil ISO 6150 B-15

Sicherheitskupplung mit Knopf gemäss ISO 6150 B-15 profil

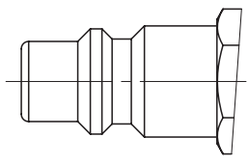
1	2	3	4	5	6	
Corpo Body Corps Körper	Pulsante, Otturatore e ghiera di scarico Button, Valve and Venting ring Bouton, Clapet et Bague d'échappement Knopf, Ventil und Entlueftungsring	Vite Thread Filet Gewindstück	Molle Springs Ressorts Feder	Sfere Balls Billes Kugel	Guarnizioni Seals Joint d'étanchéité Dichtung	Innesti Plugs Embouts Stecker
Alluminio Anodizzato Al2011 Anodised Aluminium Al2011 Aluminium anodisé Al2011 Eloxiertes Aluminium Al2011	Acciao Indurito e zincato 11SMnPb37 Hardened, zinc plated steel 11SMnPb37 Acier trempé et zingué 11SMnPb37 Stahl gehärtet und verzinkt 11SMnPb37	Ottone nichelato UNI EN 12164 CW614N Brass nickel plated UNI EN 12164 CW614N Laiton nickelé UNI EN 12164 CW614N Messing vernickelt UNI EN 12164 CW614N	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	Acciaio Inox AISI 420 Stainless Steel AISI 420 Acier Inox AISI 420 Edelstahl AISI 420	NBR NBR NBR NBR	Acciao Indurito e zincato 11SMnPb37 Hardened, zinc plated steel 11SMnPb37 Acier trempé et zingué 11SMnPb37 Stahl gehärtet und verzinkt 11SMnPb37

-20°C ÷ 80°C

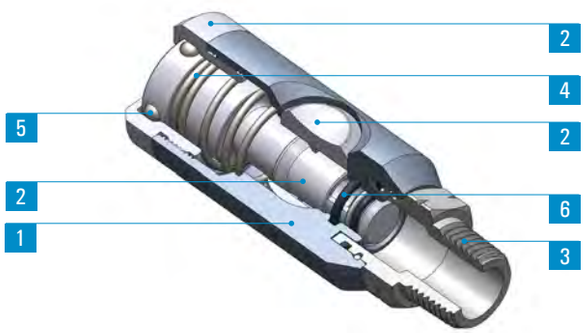
0 ÷ 12 bar

8 mm

1650 Nl/min
(6 bar · Δp = 1bar)

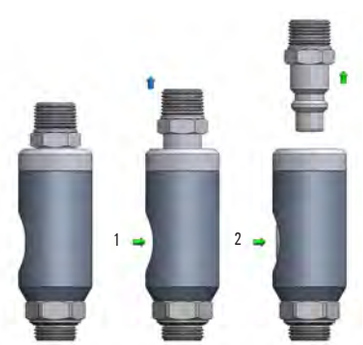


Profilo ISO 6150 B-15
ISO 6150 B-15 Profile
Profil ISO 6150 B-15
ISO 6150 B-15 Profil



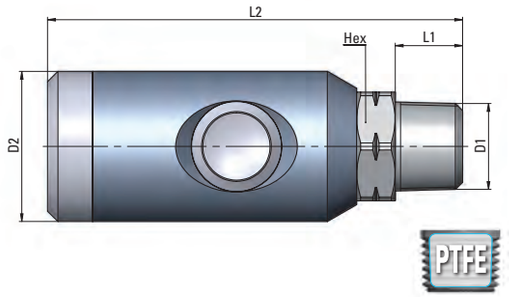
L'Innesto Rapido rimane orientabile anche dopo l'installazione.
The Coupling will remain swivelling after installation.
Le coupleur peut être orienté après le montage.
Die Kupplung bleibt nach der Montage drehbar.

CONNESSIONE - DISCONNESSIONE	CONNECTION - TO RELEASE	CONNEXION - DECONNEXION	ZUM KUPPELN - ZUM ENTKUPPELN
Inserire semplicemente l'innesto nel corpo.	Insert the plug into the Coupling	Insérer l'embout dans le coupleur pour accoupler les deux composants	Stecker in die Kupplung einstecken
Per la disconnessione dell'innesto dal corpo femmina è necessario seguire 2 semplici fasi: L'innesto è inserito nel corpo femmina Fase 1: Premere il pulsante di sgancio permettendo così lo scarico dell'aria del circuito a valle; l'innesto in questa fase è ancora trattenuto all'interno del corpo femmina. Fase 2: Premere nuovamente il pulsante per rimuovere l'innesto dal corpo femmina.	To disconnect the plug follow instructions below: Plug inserted in Coupling Step 1: Press the button once to vent the downstream air from the circuit; at this time the plug is still captive in the Coupling. Step 2: Press the button one more time to release the plug.	Pour sortir l'embout suivre les indications ci-dessous: Embout inséré dans le coupleur Phase 1: Appuyer sur le bouton pour que la pression s'échappe du circuit. L'embout reste cependant encore dans le coupleur. Phase 2: Pour déconnecter l'embout, appuyer une deuxième fois sur le bouton.	Zum Entkuppeln, den folgen den Anweisungen folgen: Der Stecker ist gekuppelt Phase 1: Auf dem Knopf einmal drücken. Dadurch wird die Anlage entlüftet dennoch bleibt der Stecker in der Kupplung gesichert. Phase 2: Erst bei einem zweiten Drücken auf dem Knopf wird der Stecker gelöst.



PU 44-11

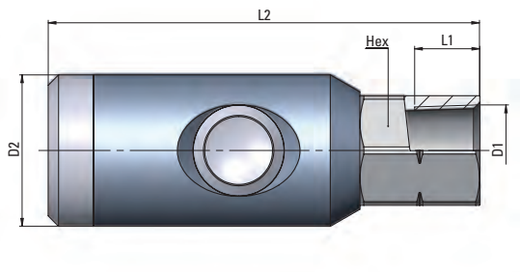
Innesto rapido con filetto maschio | Male coupling | Coupleur mâle | Einschraubkupplung



Type	D1 NPTF	D2	L1	L2	CH	g
11 00 3/8	3/8	29	13	80,2	21	153
11 00 1/2	1/2	29	17	84,2	22	-

PU 44-12

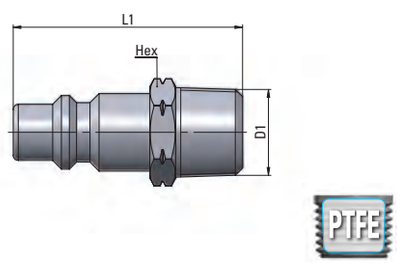
Innesto rapido con filetto femmina | Female coupling | Coupleur femelle | Aufschraubkupplung



Type	D1 NPTF	D2	L1	L2	CH	g
12 00 3/8	3/8	29	12,5	82,7	21	168,5
12 00 1/2	1/2	29	13,5	84,7	24	-

PU 44-20

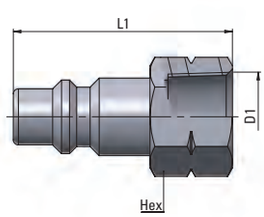
Innesto con filetto maschio | Male plug | Embout mâle | Einschraubverschlußnippel



Type	D1 NPTF	L1	HEX	g
20 00 3/8	3/8	44,5	18	35,2
20 00 1/2	1/2	49,5	22	50,6

PU 44-21

Innesto con filetto femmina | Female plug | Embout femelle | Aufschraubverschlußnippel



Type	D1 NPTF	L1	CH	g
21 00 3/8	3/8	42,5	20	37,5
21 00 1/2	1/2	46,5	22	55,3

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PU 45

Innesto rapido a pulsante con dispositivo di sicurezza per profilo ARO 210

Push-button safety coupling according to ARO 210

Coupleur securite a bouton selon profil ARO 210

Sicherheitskupplung mit Knopf gemäss ARO 210 profil

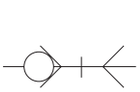
1	2	3	4	5	6	
Corpo Body Corps Körper	Pulsante, Otturatore e ghiera di scarico Button, Valve and Venting ring Bouton, Clapet et Bague d'échappement Knopf, Ventil und Entlueftungsring	Vite Thread Filet Gewindstück	Molle Springs Ressorts Feder	Sfere Balls Billes Kugel	Guarnizioni Seals Joint d'étanchéité Dichtung	Innesti Plugs Embouts Stecker
Alluminio Anodizzato Al2011 Anodised Aluminium Al2011 Aluminium anodisé Al2011 Eloxiertes Aluminium Al2011	Acciao Indurito e zincato 11SMnPb37 Hardened, zinc plated steel 11SMnPb37 Acier trempé et zingué 11SMnPb37 Stahl gehärtet und verzinkt 11SMnPb37	Ottone nichelato UNI EN 12164 CW614N Brass nickel plated UNI EN 12164 CW614N Laiton nickelé UNI EN 12164 CW614N Messing vernickelt UNI EN 12164 CW614N	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	Acciaio Inox AISI 420 Stainless Steel AISI 420 Acier Inox AISI 420 Edelstahl AISI 420	NBR NBR NBR NBR	Acciaio Nichelato 11SMnPb37 Nickel plated steel 11SMnPb37 Acier Nickelé 11SMnPb37 Stahl Vernickelt 11SMnPb37

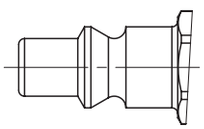
-20°C ÷ 80°C

0 ÷ 12 bar

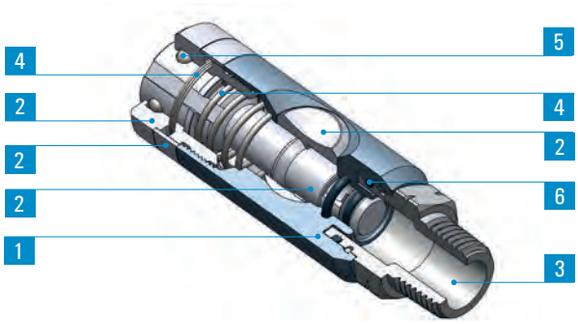
5,5 mm

1080 Nl/min
(6 bar · Δp = 1bar)





Profilo ARO 210
ARO 210 Profile
Profil ARO 210
ARO 210 Profil

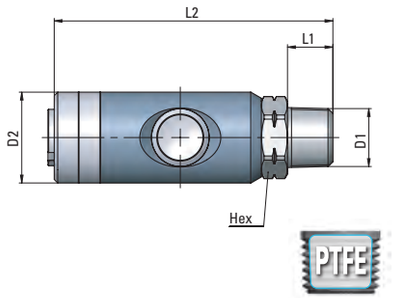


L'Innesto Rapido rimane orientabile anche dopo l'installazione.
The Coupling will remain swivelling after installation.
Le coupleur peut être orienté après le montage.
Die Kupplung bleibt nach der Montage drehbar.

CONNESSIONE - DISCONNESSIONE	CONNECTION - TO RELEASE	CONNEXION - DECONNEXION	ZUM KUPPELN - ZUM ENTKUPPELN
Inserire semplicemente l'innesto nel corpo.	Insert the plug into the Coupling	Insérer l'embout dans le coupleur pour accoupler les deux composants	Stecker in die Kupplung einstecken
Per la disconnessione dell'innesto dal corpo femmina è necessario seguire 2 semplici fasi: L'innesto è inserito nel corpo femmina Fase 1: Premere il pulsante di sgancio permettendo così lo scarico dell'aria del circuito a valle; l'innesto in questa fase è ancora trattenuto all'interno del corpo femmina. Fase 2: Premere nuovamente il pulsante per rimuovere l'innesto dal corpo femmina.	To disconnect the plug follow instructions below: Plug inserted in Coupling Step 1: Press the button once to vent the downstream air from the circuit; at this time the plug is still captive in the Coupling. Step 2: Press the button one more time to release the plug.	Pour sortir l'embout suivre les indications ci-dessous: Embout inséré dans le coupleur Phase 1: Appuyer sur le bouton pour que la pression s'échappe du circuit. L'embout reste cependant encore dans le coupleur. Phase 2: Pour déconnecter l'embout, appuyer une deuxième fois sur le bouton.	Zum Entkuppeln, den folgen den Anweisungen folgen: Der Stecker ist gekuppelt Phase 1: Auf dem Knopf einmal drücken. Dadurch wird die Anlage entlüftet dennoch bleibt der Stecker in der Kupplung gesichert. Phase 2: Erst bei einem zweiten Drücken auf dem Knopf wird der Stecker gelöst.

PU 45-11

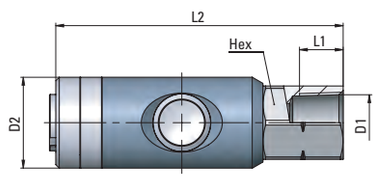
Innesto rapido con filetto maschio | Male coupling | Coupleur mâle | Einschraubkupplung



Type	D1 NPTF	D2	L1	L2	HEX	g
11 00 1/4	1/4	26	13	80,8	21	-
11 00 3/8	3/8	26	13	79,8	21	-
11 00 1/2	1/2	26	17	83,8	22	-

PU 45-12

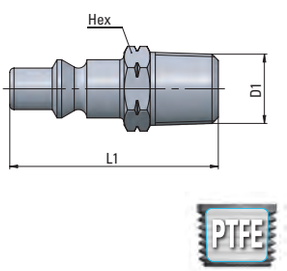
Innesto rapido con filetto femmina | Female coupling | Coupleur femelle | Aufschraubkupplung



Type	D1 NPTF	D2	L1	L2	HEX	g
12 00 1/4	1/4	26	9	81,8	21	-
12 00 3/8	3/8	26	10	82,3	21	-
12 00 1/2	1/2	26	11	84,3	24	-

PU 45-20

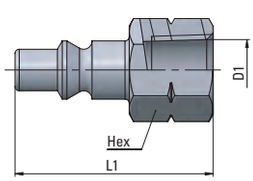
Innesto con filetto maschio | Male plug | Embout mâle | Einschraubverschlußnippel



Type	D1 NPTF	L1	HEX	g
20 00 1/4	1/4	40,8	14	20
20 00 3/8	3/8	40,8	18	26,7
20 00 1/2	1/2	45,8	22	42,2

PU 45-21

Innesto con filetto femmina | Female plug | Embout femelle | Aufschraubverschlußnippel



Type	D1 NPTF	L1	CH	g
21 00 1/4	1/4	38,8	17	26,2
21 00 3/8	3/8	38,8	20	29,4
21 00 1/2	1/2	42,8	24	46

GX LINE

cmatic®
PNEUMATIC FITTINGS

Innesti Rapidi in Acciaio Inox 316L
316L Stainless Steel Couplings
Coupleurs en Acier Inox 316L
Kupplungen aus Edelstahl 1.4404

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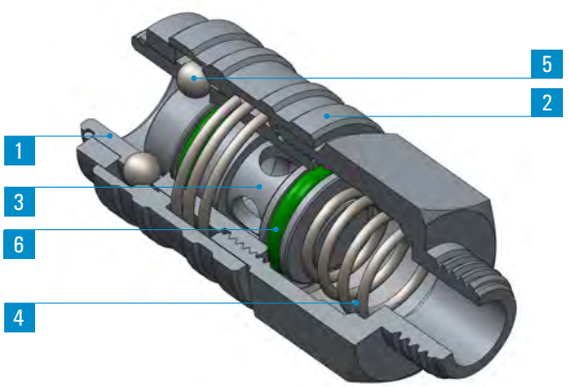
GX

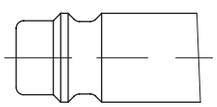
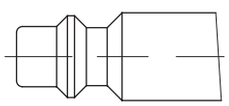
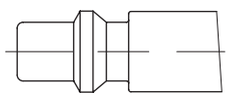
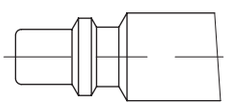
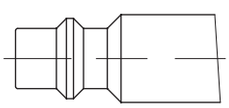
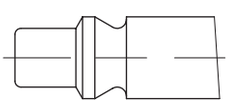
Innesto rapido multipresa in inox
Stainless steel multi socket quick coupling
Coupleur multiprofil en acier inox
Multiprofilkupplung aus Edelstahl

1	2	3	4	5	6	
Corpo Body Corps Körper	Ghiera di commando Command Sleeve Douille de commande Absperrhülse	Otturatore Valve Clapet Ventil	Molle Springs Ressorts Feder	Sfere Balls Billes Kugel	Guarnizioni Seals Joint d'étanchéité Dichtung	Innesti Plugs Embouts Stecker
Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404)			Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	Acciaio Inox AISI 420 Stainless Steel AISI 420 Acier Inox AISI 420 Edelstahl AISI 420	FPM conforme FDA FPM Compliant With FPM comforme à FDA FPM, FDA Konform	Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404)

-20°C ÷ 150°C

0 ÷ 15 bar



Intercambiabilità con i profili Suitable with following plugs profiles Interchangéable avec les suivants profils Austauschbar mit folgenden Profilen	Portata Flow rate Débit Durchfluß	Nl/min (6 bar - Δp = 1bar)
 Profilo Europeo European Profile Profil européen Europäisches Profil	820	
 Profilo ISO 6150 B ISO 6150 B Profile Profil ISO 6150 B ISO 6150 B Profil	715	
 Profilo Svedese Standard Swedisch Profile Profil Standard Suédois Standard schwedisches Profil	725	
 Profilo Italiano Standard Italian Profile Profil Standard Italien Standard Italienisches Profil	670	
 Profilo MIL C4109 MIL C4109 Profile Profil MIL C4109 MIL C4109 Profil	715	
 Profilo ARO 210 ARO 210 Profile Profil ARO 210 ARO 210 Profil	705	

Scala 1:1 - Scale 1:1 - Echelle 1:1 - Maßstab 1:1

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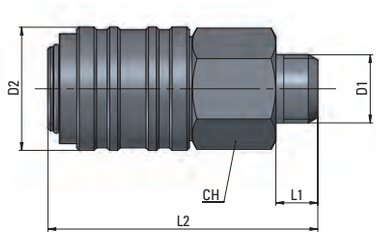
GX 10-11

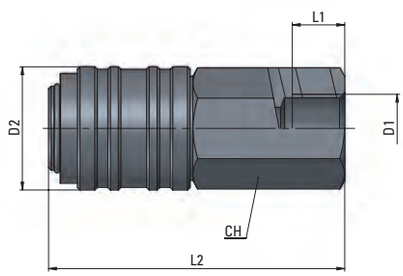
Innesto rapido con filetto maschio | Male coupling | Coupleur mâle | Einschraubkupplung



Type	D1	D2	L1	L2	CH	g
11 00 14	**G1/4**	23,5	8	51.5	21	87,8
11 00 38	**G3/8**	23,5	9	51.5	21	86,7

GX 10-12

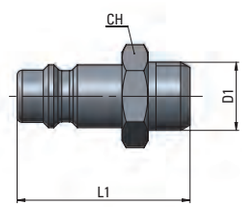
Innesto rapido con filetto femmina | Female coupling | Coupleur femelle | Aufschraubkupplung



Type	D1	D2	L1	L2	CH	g
12 00 14	**G1/4**	23,5	10	56.5	21	110,9
12 00 38	**G3/8**	23,5	10	58	21	106,3

GX 10-20

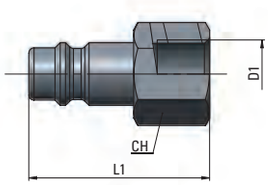
Innesto con filetto maschio, profilo europeo | Male plug according to european profile | Embout mâle selon profil européen | Stecker gemäss europäisches Profil, Einschraub



Type	D1	L1	CH	g
20 00 14	**G1/4**	33	17	20,5
20 00 38	**G3/8**	33	21	30,4

GX 10-21

Innesto con filetto femmina, profilo europeo | Female plug according to european profile | Embout femelle selon profil européen | Stecker gemäss europäisches Profil, Aufschraub



Type	D1	L1	CH	g
21 00 14	**G1/4**	34.5	17	23,6
21 00 38	**G3/8**	35	21	31,7
21 00 12	**G1/2**	38	24	39,3

PUX LINE

cmatic®
PNEUMATIC FITTINGS

Innesti Rapidi in Acciaio Inox 316L NPT
316L Stainless Steel Couplings, NPT
Coupleurs en Acier Inox 316L, NPT
Kupplungen aus Edelstahl 1.4404, NPT

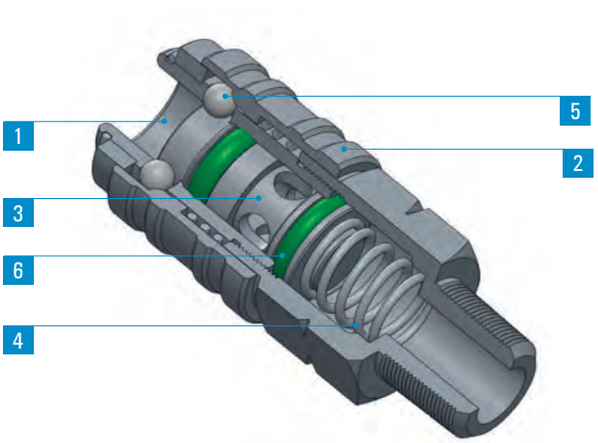
PUX

Innesto rapido multipresa in inox | Stainless steel multi socket quick coupling | Coupleur multiprofil en acier inox | Multiprofilkupplung aus Edelstahl

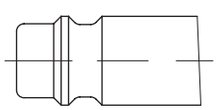
1	2	3	4	5	6	
Corpo Body Corps Körper	Ghiera di commando Command Sleeve Douille de commande Absperrhülse	Otturatore Valve Clapet Ventil	Molle Springs Ressorts Feder	Sfere Balls Billes Kugel	Guarnizioni Seals Joint d'étanchéité Dichtung	Innesti Plugs Embouts Stecker
Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404)			Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	Acciaio Inox AISI 420 Stainless Steel AISI 420 Acier Inox AISI 420 Edelstahl AISI 420	FPM FPM FPM FPM	Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404)

-20°C ÷ 150°C

0 ÷ 15 bar

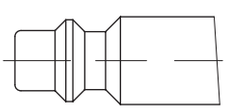


Intercambiabilità con i profili Suitable with following plugs profiles Interchangéable avec les suivants profils Austauschbar mit folgenden Profilen	Portata Flow rate Débit Durchfluß	Nl / min (6 bar - Δp = 1bar)



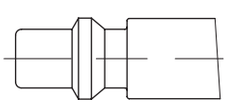
Profilo Europeo
European Profile
Profil européen
Europäisches Profil

820



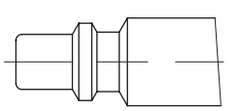
Profilo ISO 6150 B
ISO 6150 B Profile
Profil ISO 6150 B
ISO 6150 B Profil

715



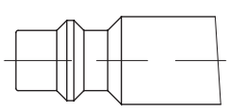
Profilo Svedese
Standard Swedisch Profile
Profil Standard Suédois
Standard schwedisches Profil

725



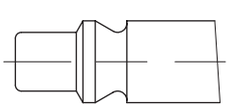
Profilo Italiano
Standard Italian Profile
Profil Standard Italien
Standard Italienisches Profil

670



Profilo MIL C4109
MIL C4109 Profile
Profil MIL C4109
MIL C4109 Profil

715



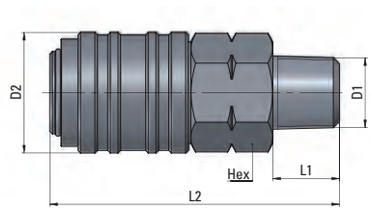
Profilo ARO 210
ARO 210 Profile
Profil ARO 210
ARO 210 Profil

705

Scala 1:1 - Scale 1:1 - Echelle 1:1 - Maßstab 1:1

PUX 10-11

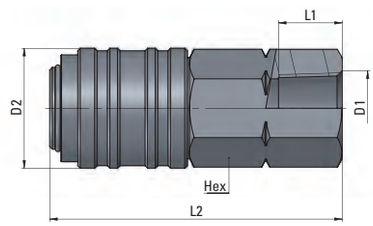
Innesto rapido con filetto maschio | Male coupling | Coupleur mâle | Einschraubkupplung



Type	D1 NPTF	D2	L1	L2	HEX	g
11 00 1/4	1/4	23,5	13	56,5	21	-
11 00 3/8	3/8	23,5	13	55,5	21	-

PUX 10-12

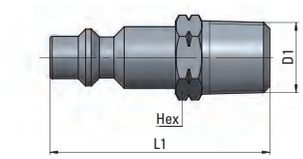
Innesto rapido con filetto femmina | Female coupling | Coupleur femelle | Aufschraubkupplung



Type	D1 NPTF	D2	L1	L2	HEX	g
12 00 1/4	1/4	23,5	12,5	57,5	21	-
12 00 3/8	3/8	23,5	12,5	58,5	21	-

PUX 10-20

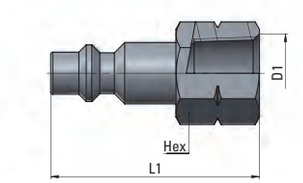
Innesto con filetto maschio, profilo ISO6150 B-12 | Male plug according to ISO6150 B-12 profile | Embout mâle selon profil ISO6150 B-12 | Stecker gemäss ISO6150 B-12 Profil, Einschraub



Type	D1 NPTF	L1	HEX	g
20 00 1/4	1/4	42	14	23,3
20 00 3/8	3/8	42	18	-

PUX 10-21

Innesto con filetto femmina, profilo ISO6150 B-12 | Female plug according to ISO6150 B-12 profile | Embout femelle selon profil ISO6150 B-12 | Stecker gemäss ISO6150 B-12 Profil, Aufschraub



Type	D1 NPTF	L1	HEX	g
21 00 1/4	1/4	41	17	-
21 00 3/ 8	3/8	42	21	41

GX Safety

cmatic®
PNEUMATIC FITTINGS

Innesti Rapidi di Sicurezza in Acciaio Inox 316L
316L Stainless Steel Safety Couplings
Coupleurs de Sécurité en Acier Inox 316L
Sicherheitskupplungen aus Edelstahl 1.4404

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GX 46

Innesto rapido a pulsante con dispositivo di sicurezza per profilo europeo

Push-button safety coupling according european profile

Coupleur securite a bouton selon profil européen

Sicherheitskupplung mit Knopf Gemäss Europäisches Profil

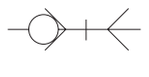
1	2	3	4	5	6	
Corpo Body Corps Körper	Pulsante, Otturatore e ghiera di scarico Button, Valve and Venting ring Bouton, Clapet et Bague d'échappement Knopf, Ventil und Entlueftungsring	Vite Thread Filet Gewindstück	Molle Springs Ressorts Feder	Sfere Balls Billes Kugel	Guarnizioni Seals Joint d'étanchéité Dichtung	Innesti Plugs Embouts Stecker
Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404)			Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	Acciaio Inox AISI 420 Stainless Steel AISI 420 Acier Inox AISI 420 Edelstahl AISI 420	FPM FPM FPM FPM	Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404)

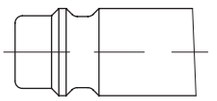
-20°C ÷ 150°C

0 ÷ 12 bar

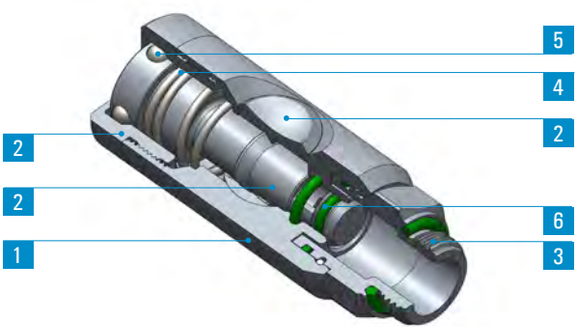
7,4 mm

1500 Nl/min
(6 bar - Δp = 1bar)





Profilo Europeo
European Profile
Profil européen
Europäisches Profil

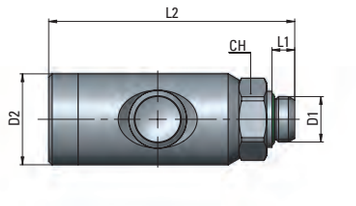


L'Innesto Rapido rimane orientabile anche dopo l'installazione.
The Coupling will remain swivelling after installation.
Le coupleur peut être orienté après le montage.
Die Kupplung bleibt nach der Montage drehbar.

CONNESSIONE - DISCONNESSIONE	CONNECTION - TO RELEASE	CONNEXION - DECONNEXION	ZUM KUPPELN - ZUM ENTKUPPELN
Inserire semplicemente l'innesto nel corpo.	Insert the plug into the Coupling	Insérer l'embout dans le coupleur pour accoupler les deux composants	Stecker in die Kupplung einstecken
Per la disconnessione dell'innesto dal corpo femmina è necessario seguire 2 semplici fasi: L'innesto è inserito nel corpo femmina Fase 1: Premere il pulsante di sgancio permettendo così lo scarico dell'aria del circuito a valle; l'innesto in questa fase è ancora trattenuto all'interno del corpo femmina. Fase 2: Premere nuovamente il pulsante per rimuovere l'innesto dal corpo femmina.	To disconnect the plug follow instructions below: Plug inserted in Coupling Step 1: Press the button once to vent the downstream air from the circuit; at this time the plug is still captive in the Coupling. Step 2: Press the button one more time to release the plug.	Pour sortir l'embout suivre les indications ci-dessous: Embout inséré dans le coupleur Phase 1: Appuyer sur le bouton pour que la pression s'échappe du circuit. L'embout reste cependant encore dans le coupleur. Phase 2: Pour déconnecter l'embout, appuyer une deuxième fois sur le bouton.	Zum Entkuppeln, den folgen den Anweisungen folgen: Der Stecker ist gekuppelt Phase 1: Auf dem Knopf einmal drücken. Dadurch wird die Anlage entlüftet dennoch bleibt der Stecker in der Kupplung gesichert. Phase 2: Erst bei einem zweiten Drücken auf dem Knopf wird der Stecker gelöst.

GX 46-10

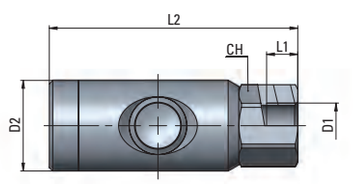
Innesto rapido con filetto maschio | Male coupling | Coupleur mâle | Einschraubkupplung



Type	D1	D2	L1	L2	CH	g
10 00 14	**G1/4**	26	6,5	70.4	21	177
10 00 38	**G3/8**	26	7	69.9	21	176,5
10 00 12	**G1/2**	26	8,5	72.4	25	197,5

GX 46-12

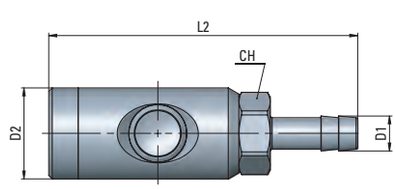
Innesto rapido con filetto femmina | Female coupling | Coupleur femelle | Aufschraubkupplung



Type	D1	D2	L1	L2	CH	g
12 00 14	**G1/4**	26	9	71.4	21	190
12 00 38	**G3/8**	26	10	75.4	21	190
12 00 12	**G1/2**	26	11	77.4	24	200,5

GX 46-13

Innesto rapido con portagomma | Coupling with hose connection | Coupleur avec douille cannelée | Kupplung mit Schlauchtülle



	Type	Ø Tubo	D1	D2	L2	CH	g
	13 06 00	**6**	7	26	88.4	21	178,5
	13 09 00	**9**	10	26	88.4	21	184
new	**13 10 00**	**10**	11	26	88.4	21	-
	13 13 00	**13**	14	26	88.4	21	188,5

Per gli Innesti da utilizzare si veda la relativa sezione della **serie GX10**.
For further info on the plugs to use, please revert to the **GX10 section**.
Pour autres renseignements concernants les embouts à utiliser, voir la **section des GX10.**
Bei weiteren Auskünften über die einsetzbaren Stecker, bitte sich auf den Abschnitt über **GX10** beziehen.

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CO LINE

cmatic®
PNEUMATIC FITTINGS

Connettori Multipli
Multiple Connectors
Multi-coupleurs
Vielfachverbinder

I

I connettori multipli sono dispositivi costituiti da una parte fissa, da collegare generalmente agli armadi di comando delle macchine ad azionamento pneumatico e da una parte mobile da collegare all'impianto di distribuzione dell'aria. Il vantaggio che offre l'utilizzo di un connettore è che un fascio di tubi (da un minimo di 4 ad un massimo di 24), viene collegato e scollegato con estrema velocità e sicurezza. Tutti i connettori sono costruiti in modo tale che un assemblaggio in senso contrario venga ad escludersi.

GB

The multiple connector is made of a fixed part to be connected to the control device of pneumatic powered machines and a mobile part to be assembled to the air distribution equipment. The big advantage offered by it, is that a bundle of hoses, varying from min 4 to max 24 tubes, can be rapidly and safely connected and disconnected.
Our multiple connector is manufactured in such a way that the reverse assembly of the two parts is not possible.

F

Les connecteurs multi-coupleurs se composent par deux parties, une mobile qui est à brancher aux armoires de commande des machines actionées pneumatiquement, l'autre, la partie fixe, se monte sur l'équipment de distribution d'air. Le grande avantage offert par le connecteur est celui de pouvoir connecter et déconnecter un faisceau de tube (de 4 jusqu'à 24 tubes) rapidement et en toute sécurité.
Nos connecteurs sont construits de façon que l'assemblage contraire des deux parties soit exclut.

D

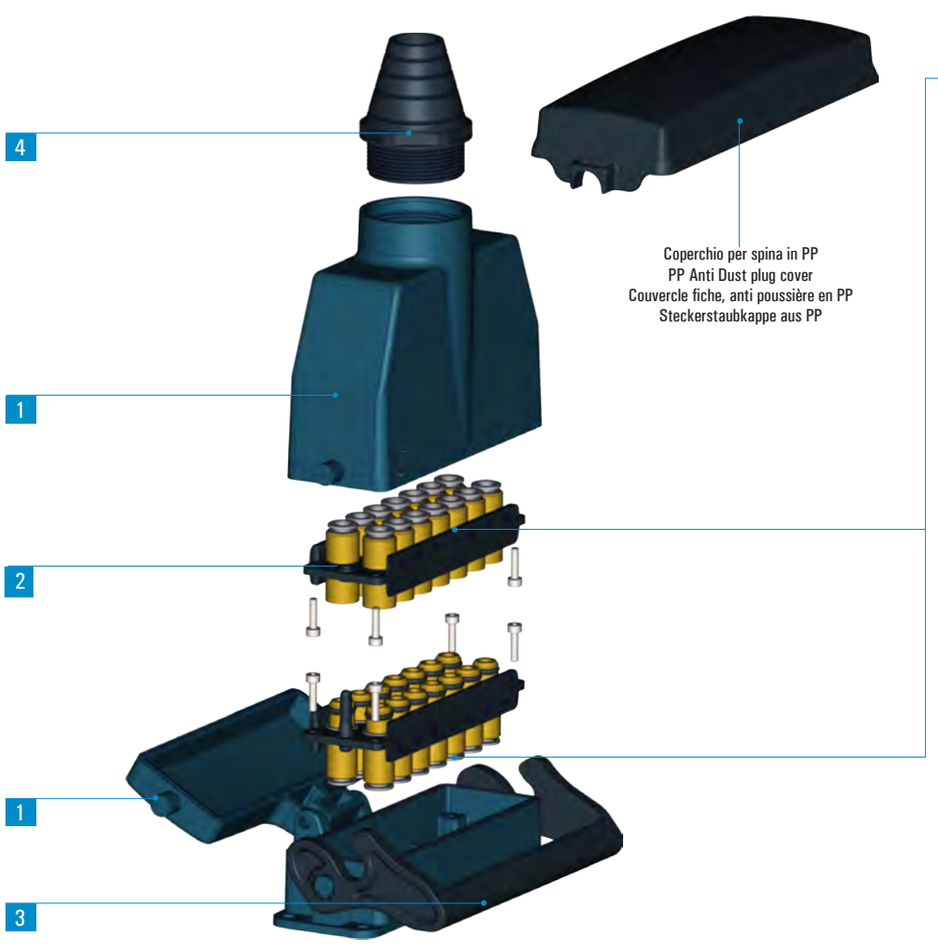
Die Vielfachverbinder bestehen aus zwei Teilen, einem beweglichen Teil, der an dem Antriebsschrank von pneumatisch gesteuerten Maschinen eingesetzt wird und einem festen Teil, der an dem Druckluftverteiler montiert wird.
Der grosse Vorteil des Vielfachverbinders ist, dass ein Schlauchpaket (von 4 bis 24 Schläuche) schnell und sicher gekuppelt und entkuppelt werden kann. Das Herstellungssystem von unseren Vielfachverbinder vermeidet, dass eine verkehrte Montage der zwei Teile nicht erfolgen kann.

CO-A

Connettori multipli con custodia rigida | Multiple connectors, rigid shell | Multi-coupleurs avec carcasse en para | Vielfachverbinder aus Para

1	2	3	4		
Carcassa connettore Multiple connector sheath Carcasse du Connecteur Vielfachverbindergehäuse	Basetta porta Innesti Couplings support Support des embouts Steckerplatte	Leva Lever Hebel Levier	Guidatubo Tubing guide Guide de tube Schlächführung	Guarnizioni Seals Joint d'étanchéité Dichtung	Raccordi automatici Push-in fittings Raccords instantanés Steckverschraubungen
PARA (Ixef® 1022) PARA (Ixef® 1022) PARA (Ixef® 1022) PARA (Ixef® 1022)	PARA (Ixef® 1023) PARA (Ixef® 1023) PARA (Ixef® 1023) PARA (Ixef® 1023)	PARA (Ixef® 1022) PARA (Ixef® 1022) PARA (Ixef® 1022) PARA (Ixef® 1022)	PA6 PA6 PA6 PA6	NBR NBR NBR NBR	Raccordi Serie MA MA push-in fittings Raccords instantanés série MA MA Steckverschraubungen

	A013	A113 ÷ A313				
-20°C ÷ 70°C	Max 7 bar	Max 15 bar	-99 KPa			



Coperchio per spina in PP
PP Anti Dust plug cover
Couvercle fiche, anti poussière en PP
Steckerstaubkappe aus PP

SISTEMA STANDARD:

Il connettore viene fornito per ogni Size di Custodia con un numero prestabilito di connessioni per diametro; tale soluzione nasce al fine di massimizzare il numero di collegamenti possibili per ogni Size a parità di diametro di tubo.

STANDARD SYSTEM:

The Multiple connector is available for each Shell Size with a predetermined number of connections; this solution is created to maximize the number of possible outlets with the same tube diameter.

SYSTÈME STANDARD

Le connecteur est fourni pour chaque taille de carcasse avec un nombre prédéterminé de sorties; cette solution est créée afin de maximiser le nombre des connexions possibles avec le même diamètre de tube.

STANDARDSYSTEM:

Der Vielfachverbinder ist bei jeder Gehäusegröße mit einer vorgegebenen Steckeranzahl zur Verfügung gestellt. Diese Lösung wurde entwickelt, um die möglichen Verbindungen beim gleichen Schlauchdurchmesser zu maximieren.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Polietilene PE, Poliuretano PU (98 Shore A).

Campi di applicazione:
Impianti pneumatici.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyethylene PE, Polyurethane PU (98 Shore A).

Application fields:
Pneumatic circuits.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
PA11, PA12, PA6, Polyethylene PE, Polyurethane PU (98 Shore A).

Domaines d'application:
Circuits pneumatiques.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyethylen PE, Polyurethan PU (98 Shore A).

Anwendungsbereiche:
Pneumatische anlagen.

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SISTEMA MODULARE

In questa configurazione si offre all'utente l'opportunità di configurare a piacimento e secondo le sue necessità il connettore multiplo componendo i diametri di tubo, il numero di uscite e la relativa disposizione.
L'utilizzatore potrà a sua scelta inserire il seguente numero di moduli in funzione della Size della custodia.

MODULAR SYSTEM

This solution is offering the user the opportunity to configure the multiple connector such as the tube diameter, the number of outlets and the layout of the same according to his needs-
The user can choose the following number of modules based on the size of the multiple connector shell.

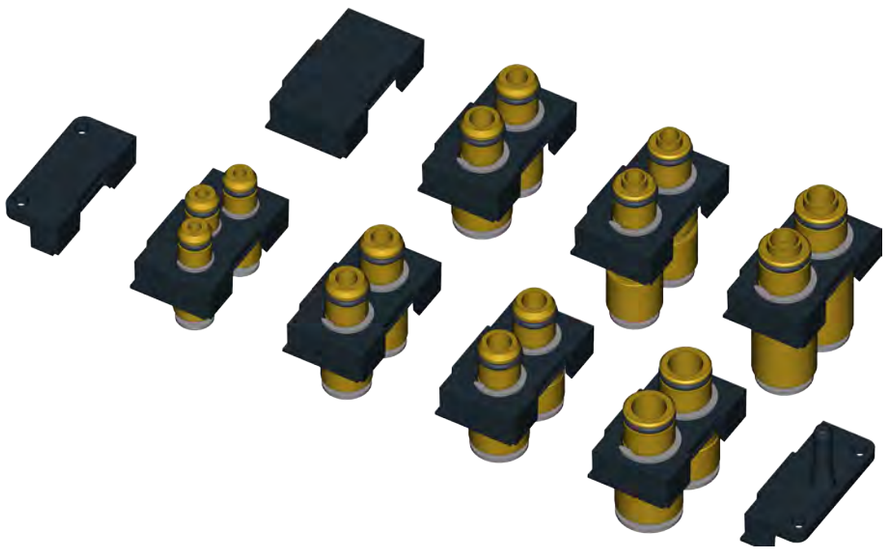
SYSTÈME MODULAIRE

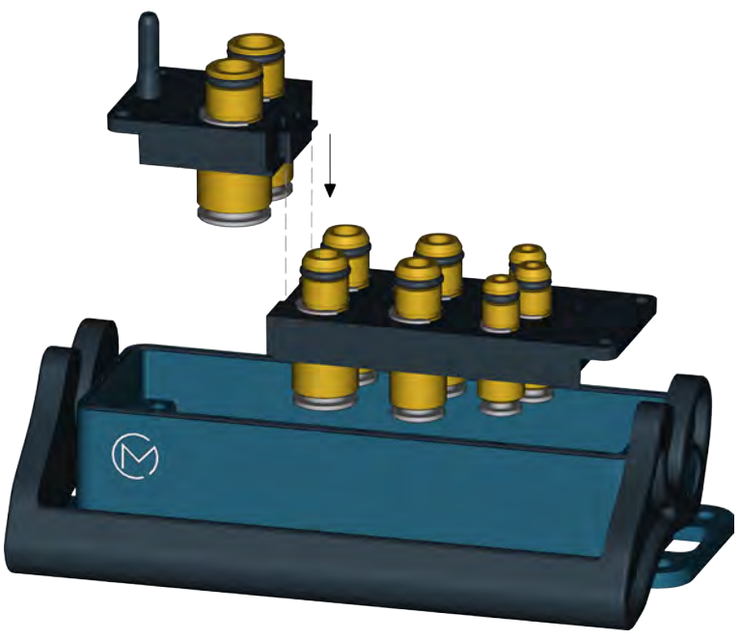
Cette solution permet à l'utilisateur la possibilité de configurer à son gré le connecteur multiple en choisissant le diamètre de tube, le nombre de sorties et leur disposition.
L'utilisateur peut choisir le nombre de modules suivants en fonction de la taille de la carcasse.

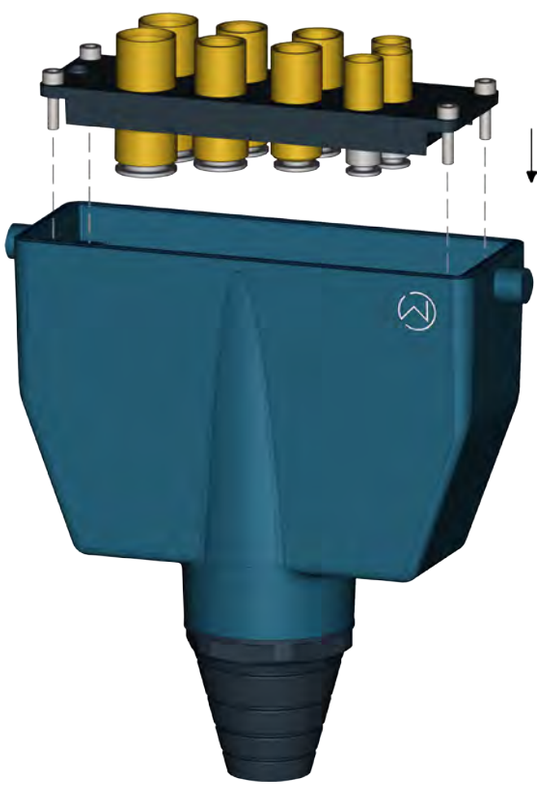
MODULARES SYSTEM

Dieses System ermöglicht den Mehrfachverbinder beliebig und bedarfsgerecht zu konfigurieren, indem jeweils der Schlauchdurchmesser, die Anzahl der Stecker und deren Anordnung nach Wunsch zusammengesetzt werden können.
Je nach Größe des Vielfachverbinders, kann die folgende Anzahl von Modulen ausgewählt werden.

Size 1	Size 2	Size 3
3 Moduli +Terminali	4 Moduli + Terminali	6 Moduli + Terminali
3 Modules + End plate	4 Mondules + End Plate	6 Modules + End Plate
3 Modules + Plaque d'extremité	4 Modules + Plaque d'extremité	6 Modules + Plaque d'extremité
3 Module + Endplatte	4 Module + Endplatte	6 Module + Endplatte





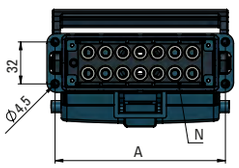


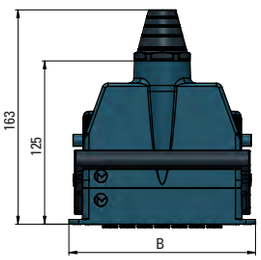
SIZE 0

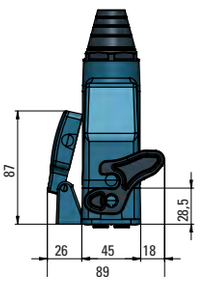
SISTEMA STANDARD | **STANDARD SYSTEM** | **SYSTÈME STANDARD** | **STANDARDSYSTEM**

A013

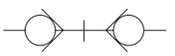
Connettore completo | Multiple connector, complete | Connecteur complet | Vielfachverbinder, komplett





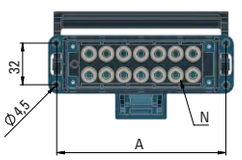


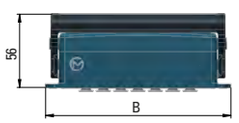
Type	A	B	Øe Tubo	N°	g
A013 06 06	82,5	95	**6**	**6**	645
A013 08 04	82,5	95	**8**	**4**	594

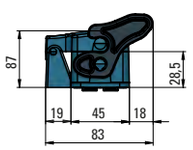


A013

Presa con coperchio | Socket with cover | Prise avec couvercle | Muffe mit Staubkappe



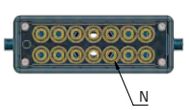


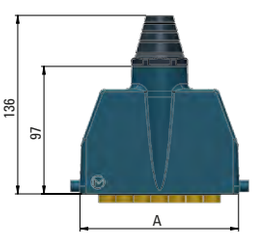


Type	A	B	Øe Tubo	N°	g
A013 06 06 Presa+coperchio	82,5	95	**6**	**6**	285
A013 08 04 Presa+coperchio	82,5	95	**8**	**4**	272

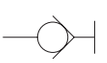
A013

Spina | Plug | Fiche | Stecker





Type	A	Øe Tubo	N°	g
A013 06 06 Spina	73	**6**	**6**	364
A013 08 04 Spina	73	**8**	**4**	330



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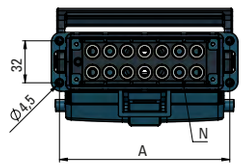
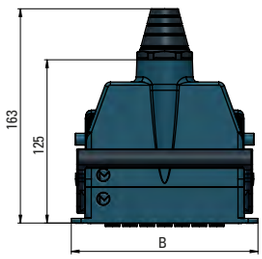
SIZE 1

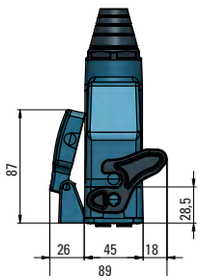
SISTEMA STANDARD | **STANDARD SYSTEM** | **SYSTÈME STANDARD** | **STANDARDSYSTEM**

A113

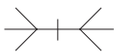
Connettore completo | Multiple connector, complete | Connecteur complet | Vielfachverbinder, komplett





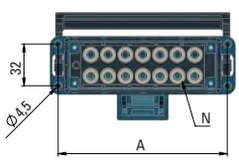


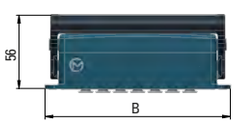
Type	A	B	Øe Tubo	N°	g
A113 04 12	103	115,5	**4**	**12**	612
A113 06 10	103	115,5	**6**	**10**	719
A113 08 08	103	115,5	**8**	**8**	656

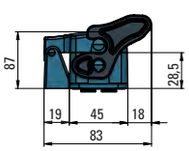


A113

Presa con coperchio | Socket with cover | Prise avec couvercle | Muffe mit Staubkappe



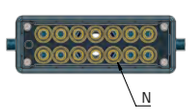


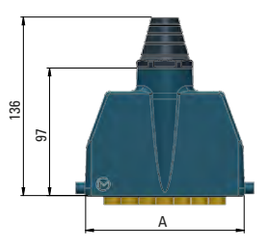


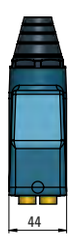
Type	A	B	Øe Tubo	N°	g
A113 04 12 Presa+coperchio	103	115,5	**4**	**12**	302
A113 06 10 Presa+coperchio	103	115,5	**6**	**10**	342
A113 08 08 Presa+coperchio	103	115,5	**8**	**8**	309

A113

Spina | Plug | Fiche | Stecker







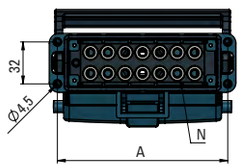
Type	A	Øe Tubo	N°	g
A113 04 12 Spina	94	**4**	**12**	318
A113 06 10 Spina	94	**6**	**10**	339
A113 08 08 Spina	94	**8**	**8**	355

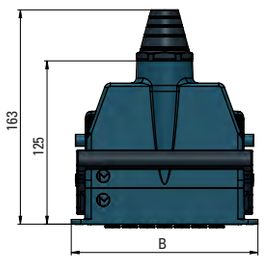
SIZE 2

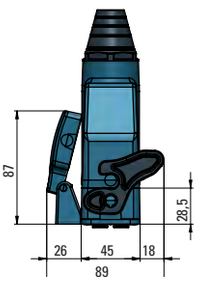
SISTEMA STANDARD | **STANDARD SYSTEM** | **SYSTÈME STANDARD** | **STANDARDSYSTEM**

A213

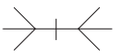
Connettore completo | Multiple connector, complete | Connecteur complet | Vielfachverbinder, komplett





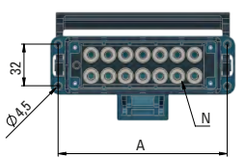


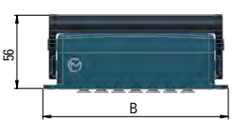
Type	A	B	Øe Tubo	N°	g
A213 04 20	130	142,5	**4**	**20**	828
A213 06 14	130	142,5	**6**	**14**	923
A213 08 10	130	142,5	**8**	**10**	801

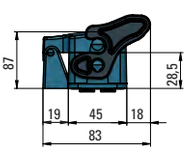


A213

Presa con coperchio | Socket with cover | Prise avec couvercle | Muffe mit Staubkappe



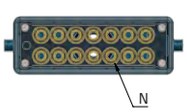


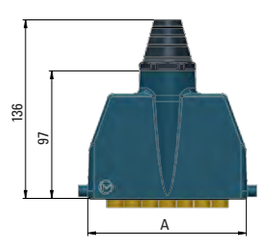


Type	A	B	Øe Tubo	N°	g
A213 04 20 Presa+coperchio	130	142,5	**4**	**20**	411
A213 06 14 Presa+coperchio	130	142,5	**6**	**14**	436
A213 08 10 Presa+coperchio	130	142,5	**8**	**10**	369

A213

Spina | Plug | Fiche | Stecker





Type	A	Øe Tubo	N°	g
A213 04 20 Spina	121	**4**	**20**	425
A213 06 14 Spina	121	**6**	**14**	495
A213 08 10 Spina	121	**8**	**10**	432

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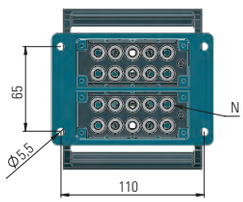
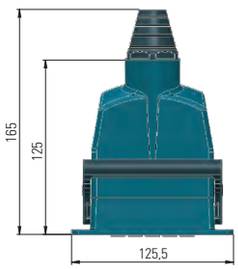
SIZE 3

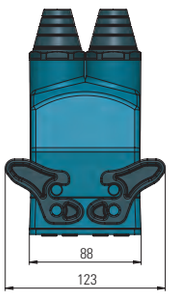
SISTEMA STANDARD | **STANDARD SYSTEM** | **SYSTÈME STANDARD** | **STANDARDSYSTEM**

A313

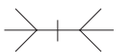
Connettore completo | Multiple connector, complete | Connecteur complet | Vielfachverbinder, komplett





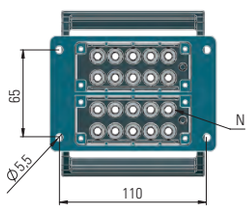


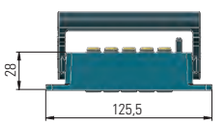
Type	Øe Tube	N°	g ⚖
A313 04 24 COMPLETO	4	24	1103
A313 06 20 COMPLETO	6	20	1319,4
A313 08 16 COMPLETO	8	16	1111,5

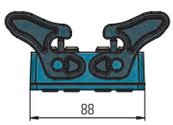


A313

Presa | Socket | Prise | Muffe



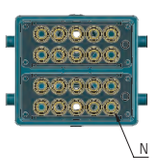


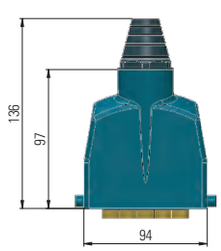


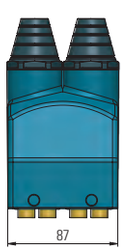
Type	Øe Tube	N°	g ⚖
A313 04 24 PRESA	4	24	-
A313 06 20 PRESA	6	20	606
A313 08 16 PRESA	8	16	-

A313

Spina | Plug | Fiche | Stecker

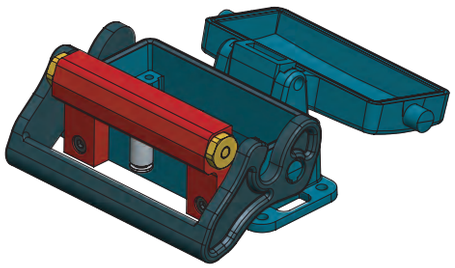






Type	Øe Tube	N°	g ⚖
A313 04 24 SPINA	4	24	-
A313 06 20 SPINA	6	20	715,6
A313 08 16 SPINA	8	16	-

PRESA CON BLOCCO ANTISGANCIO | ANTI-RELEASE SOCKET | PRISE ANTI DÉCONNECTION | MUFFE MIT ANTI-RELEASE ZUBEHOERE



	Type	g ⚖
new	A113 04 12 Presa+coperchio+blocco	-
new	A113 06 10 Presa+coperchio+blocco	427
new	A113 08 08 Presa+coperchio+blocco	-
new	A213 04 20 Presa+coperchio+blocco	-
new	A213 06 14 Presa+coperchio+blocco	-
new	A213 08 10 Presa+coperchio+blocco	471,4

Il Corpo del blocco anti-sgancio è in Alluminio Anodizzato Al6082 - The Anti-release body is made of Anodised Aluminium Al6082 - Le Corps des le Anti déconnexion bloque est en Aluminium anodisé Al6082 - Der Körper des Anti-Release-Blocks besteht aus eloxiertem Aluminium Al6082

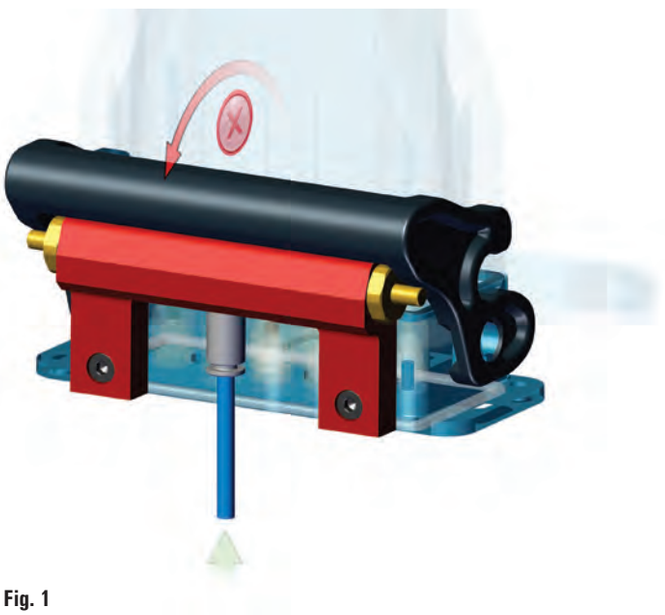


Fig. 1

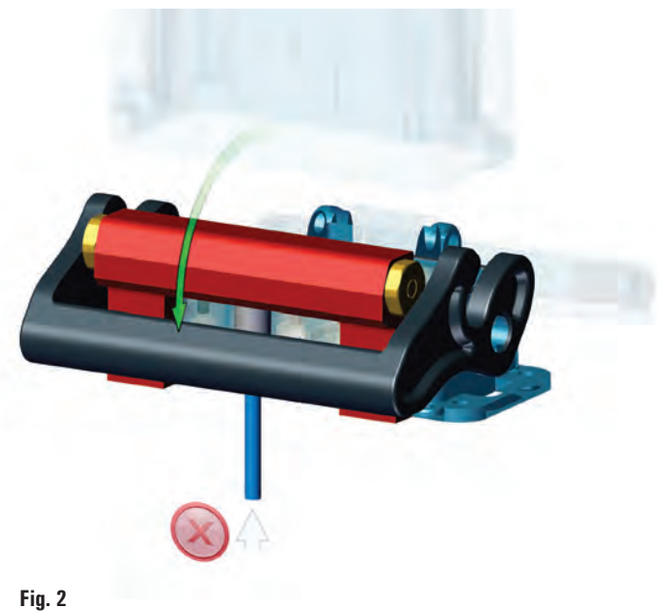


Fig. 2

La presa dotata dell'accessorio anti-sgancio evita l'apertura accidentale del connettore se ancora alimentato.
La sicurezza antisgancio (Fig. 1) si aziona alimentando il dispositivo anti sgancio con la linea principale, dopo aver collegato la spina alla presa del connettore
Per poter sganciare la spina dalla presa (Fig.2) è necessario preventivamente togliere l'alimentazione al dispositivo di sicurezza.

The Multiple connector socket equipped with the anti-release accessory prevents accidental disconnections of the connector if still pressurized.
To operate the anti-release safety device (Fig. 1), it is necessary to power the safety device from the main line once the plug has been connected to the socket.
Before disconnecting the plug from the socket (Fig. 2) turn off the power supply of the safety device.

La prise équipée de l'accessoire anti-déconnexion empêche l'ouverture accidentelle du connecteur si encore sous pression. Afin de garantir la sécurité anti-déconnexion (Fig. 1) une fois que la prise est connectée à la fiche, il est nécessaire d'alimenter le dispositif de sécurité avec la ligne principale.
Pour décrocher la fiche de la prise (Fig. 2), il faut d'abord couper l'alimentation du dispositif de sécurité.

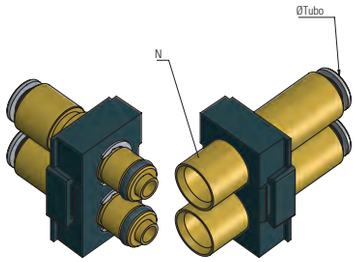
Die mit dem Anti-Release-Zubehör ausgestattete Muffe verhindert eine versehentliche Entkupplung des Steckers, wenn noch mit Druck versorgt.
Um die Entriegelungssicherheit zu gewährleisten (Abb. 1), zuerst Stecker mit Muffe zusammenmontieren und erst dann das Anti- Release Zubehör von der Hauptleitung mit Druck versorgen.
Um den Stecker zu entkuppeln (Abb. 2), zuerst die Druckversorgung vom Anti- Release Zubehoer abschalten.

trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

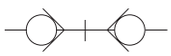
SISTEMA MODULARE | MODULAR SYSTEM | SYSTÈME MODULAIRE | MODULARES SYSTEM

MOD 2

Modulo connessioni | Push-in fittings module | Module raccords | Verschraubungsmodul

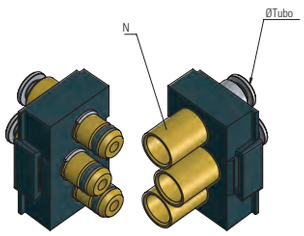


Type	Øe Tube	N°	g
6	6	2	112
8	8	2	138

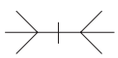


MOD 1

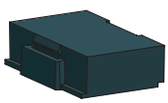
Modulo connessioni | Push-in fittings module | Module raccords | Verschraubungsmodul



Type	Øe Tube 1	Øe Tube 2	N°	g
4	4	-	3	62,6
6	6	-	2	73,5
6-8	6	8	2	73,8
8	8	-	2	73,7
10	10	-	2	82,6

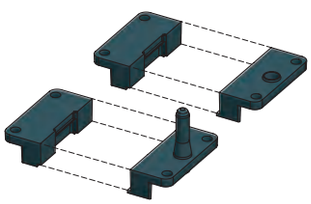


Modulo tappo | Blind module | Module plein | Blindmodul



Type	g
Tappo	4,7

Modulo terminale | End plate | Plaque d'extremité | Endplatte



Type	g
Size 1	11
Size 2	13
Size 3	22

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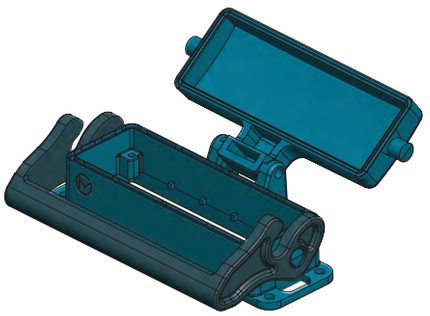
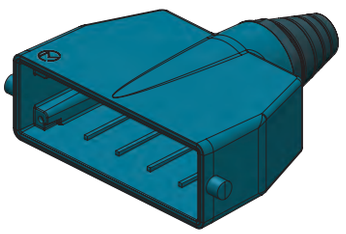
SISTEMA MODULARE | MODULAR SYSTEM | SYSTÈME MODULAIRE | MODULARES SYSTEM

Custodia presa | Socket shell | Carcasse de la prise | Muffehülle



Type	g ⚖
Size 1	154,7
Size 2	180
Size 3	-

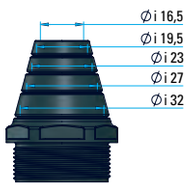
Custodia spina | Plug shell | Carcasse de la fiche | Steckerhülle



Type	g ⚖
Size 1	196,2
Size 2	226
Size 3	-

ACCESSORI | ACCESSORIES | ACCESSOIRES | ZUBEHÖR

Guidatubo | Tubing guide | Guide de tube | Schlächführung



Type	g ⚖
GUIDATUBO	14,5

Coperchio per spina | Anti dust plug cover | Couvercle fiche, anti poussière | Steckerstaubkappe

Type	L1	L2	L3	g ⚖
A013 COPERCHIO x SPINA	76	47	17,5	10
A113 COPERCHIO x SPINA	97	47	17,5	12
A213 COPERCHIO x SPINA	124	47	17,5	15
A313 COPERCHIO x SPINA	97	88	17,5	20,9

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CO-B

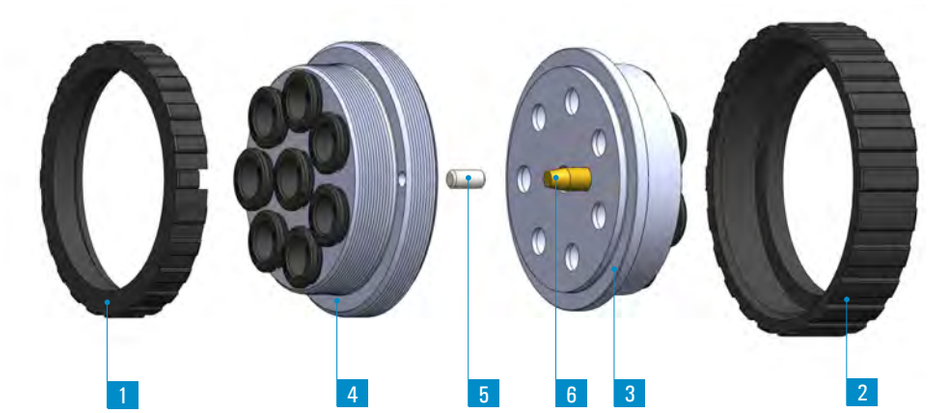
Connettori multipli passaparete e/o in linea | Bulkhead/in line multiple connectors | Multi-coupleurs passe-cloison et en ligne | Schott-und-In-Linie Vielfachverbinder

1	2	3	4	5	6
Controdado Counternut Contre écrou Kontermutter	Ghiera Sleeve Douille Überwürfmutter	Spina Plug Fiche Stecker	Presa Socket Prise Muffe	Perno Pin Pivot Stift	Vite Screw Vis Schraube
POM POM POM POM	POM POM POM POM	Alluminio Anodizzato Al2011 Anodised Aluminium Al2011 Aluminium anodisé Al2011 Eloxiertes Aluminium Al2011	Alluminio Anodizzato Al2011 Anodised Aluminium Al2011 Aluminium anodisé Al2011 Eloxiertes Aluminium Al2011	Ottone UNI EN12164 CW614N Brass UNI EN12164 CW614N Laiton UNI EN12164 CW614N Messing UNI EN12164 CW614N	Acciaio Steel Acier Stahl

-20°C ÷ 70°C

0 ÷ 10 bar

-99 KPa



SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Polietilene PE, Poliuretano PU (98 Shore A).

Campi di applicazione:
Impianti pneumatici.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyethylene PE, Polyurethane PU (98 Shore A).

Application fields:
Pneumatic circuits.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
PA11, PA12, PA6, Polyethylene PE, Polyurethane PU (98 Shore A).

Domaines d'application:
Circuits pneumatiques.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyethylen PE, Polyurethan PU (98 Shore A).

Anwendungsbereiche:
Pneumatische anlagen.

MONTAGGIO A PANNELLO

Svitare il controdado 1 dalla presa del connettore; avvitare la vite 6 fino a farla sporgere dello stesso spessore della parete (Fig. 2). Inserire la presa nel foro sulla parete con la vite in corrispondenza della relative sede (Fig. 1) ivi ricavata. Riavvitare il controdado 1 fino in battuta sulla parete (Fig. 3).

PANEL MOUNTING

Loosen counter nut 1 from the multiple connector socket; tighten the screw 6 to let it sticks out as much as the wall thickness (Fig.2). Place the socket in the wall hole and allow for the screw 6 to fit into the seat drilled through in the wall (Fig.1). Tighten the counter nut 1 on socket body until bottoms (Fig.3).

MONTAGE A CLOISON

Dévisser le contre écrou (1) de la prise du connecteur et visser la vis (6) jusqu' elle dépasse son siège, si tant que l'épaisseur de la cloison (Fig 2). Monter la prise à la cloison de façon que la vis loge dans le siège percé dans la cloison (Fig.1).
Visser le contre écrou (1) sur la prise jusqu'au fond (Fig 3).

WANDMONTAGE

Kontermutter 1 von der Muffe lösen und dann Schraube 6 eindrehen, bis sie um das Maß der Wanddicke herausragt (Fig.2). Muffe in das Wandloch einstecken und zusammen mit der Kontermutter 6 so anziehen, dass die Schraube in das dazu gebohrte Gehäuse an der Wand 1 genau passt (Fig.1). Die Kontermutter bis zum Anschlag auf die Muffe anziehen (Fig.3).

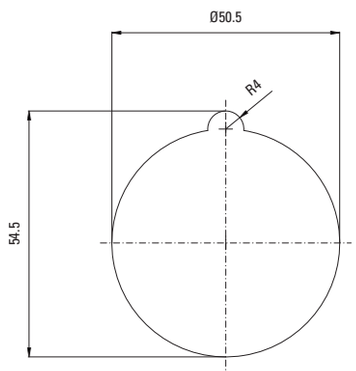


Fig. 1

Fig. 2

Fig. 3

USO "VOLANTE" DEL CONNETTORE

Avvitare il controdado **1** fino in battuta svitandolo poi di quanto basta per far coincidere la sede **A** con la vite **6** (Fig. 5). Avvitare la vite **6** fino a farla entrare nella sua sede **A** all'interno del controdado (Fig. 6); così facendo il controdado **1** non avrà più la possibilità di ruotare e sarà punto di presa per avvitare e svitare la ghiera **2** per accoppiare/disaccoppiare le due parti del connettore.

FLOOR MOUNTING

Tighten counter nut **1** until it bottoms and then unscrew it a bit to allow the screw to fit into its seat **A** (Fig.5). Tighten the screw **6** all the way through its seat **A** into the counter nut (Fig.6). At this stage, the counter nut can no longer rotate and will help tighten and loosen the sleeve **2** to connect and disconnect the two multiple connector components.

MONTAGE VOLANT

Visser le contre écrou **1** jusqu'au fond tout en le dévissant un peu pour que la vis **6** se trouve en correspondance de son siège **A** (Fig.5).
Visser la vis **6** tout au fond du siège **A** à l'intérieur du contre écrou (Fig.6). Comme ça, le contre écrou ne pourra plus tourner et servira d'appui pour visser et dévisser la douille **2** tout en permettant le montage et démontage de deux composants du multi coupleur.

BODENMONTAGE

Kontermutter **1** bis zum Anschlag anziehen und danach soviel lösen bis die Schraube **6** in das Kontermutterngehäuse **1** passt (Fig.5). Die Schraube in das Kontermuttergehäuse bis zum Anschlag eindrehen (Fig.6). Dadurch bleibt die Kontermutter fest angezogen (gesichert) und gilt als Greiffläche für die Überwurfmutter zum Kuppeln oder Entkuppeln der zwei Bauteile, um diese zusammenzuschrauben oder zu lösen.

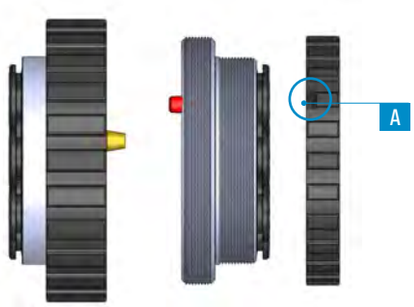


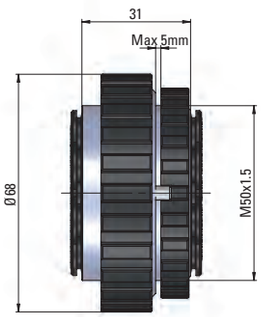
Fig. 4

Fig. 5

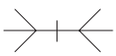
Fig. 6

B113

Connettore completo | Multiple connector, complete | Connecteur complet | Vielfachverbinder, komplett

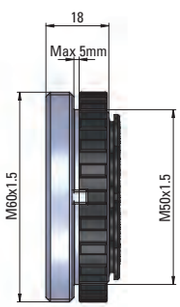


Type	Øe Tubo	N°	g
B113 04 12 COMPLETO	4	12	201,4
B113 06 10 COMPLETO	6	10	184,1
B113 08 08 COMPLETO	4	8	174,6



B113

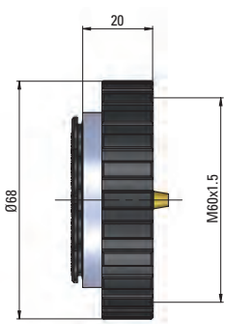
Presa | Socket | Prise | Muffe



Type	Øe Tubo	N°	g
B113 04 12 PRESA	4	12	103
B113 06 10 PRESA	6	10	94,5
B113 08 08 PRESA	4	8	89,9

B113

Spina | Plug | Fiche | Stecker



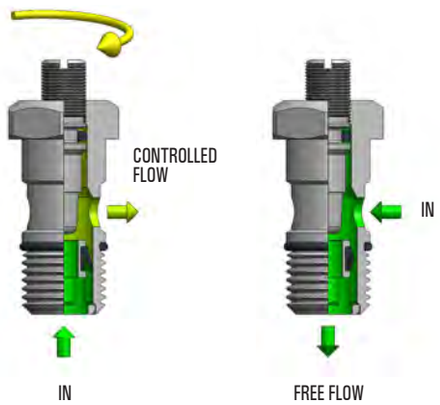
Type	Øe Tubo	N°	g
B113 04 12 SPINA	4	12	101,8
B113 06 10 SPINA	6	10	93,3
B113 08 08 SPINA	4	8	89,1

MV LINE

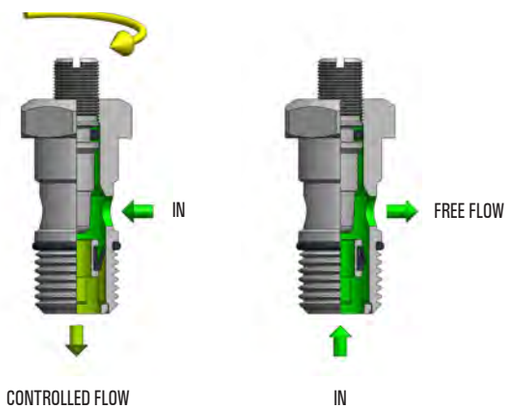
cmatic®
PNEUMATIC FITTINGS

Raccordi a Funzione
Function Fittings
Raccords à fonction
Funktionsverschraubungen

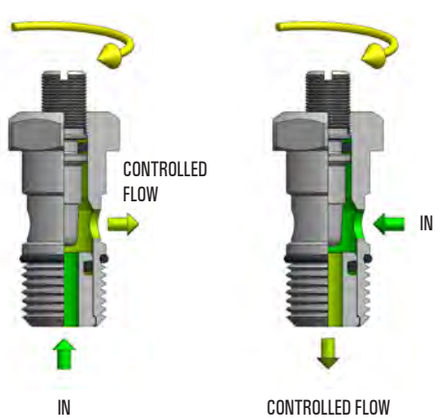
.../C = Regolazione del Flusso in Uscita
Meter out flow control
Réducteur de débit fonctionnant à échappement
Abluftdrosselung



.../V = Regolazione del Flusso in Ingresso
Meter in flow control
Réducteur de débit fonctionnant à l'admission
Zuluftdrosselung



.../B = Regolazione del Flusso in entrambe le direzioni
Bidirectional flow control
Réducteur de débit bidirectionel
Beidseitige Drosselung



Questi dispositivi offrono la possibilità di regolare la portata d'aria in un circuito pneumatico. In base al tipo di regolatore impiegato, la regolazione può avvenire in entrambi i sensi (Regolatore Bidirezionale), oppure in un unico senso (Regolatore Unidirezionale). I Regolatori di Flusso Unidirezionali, risultano particolarmente adatti per la regolazione della velocità di cilindri pneumatici.

They can adjust the flow in a pneumatic circuit. Depending on the flow control used, the setting can be made both ways (Bidirectional Flow Control), or just one way (Unidirectional Flow Control). The Unidirectional Flow Control is particularly used to adjust the speed of pneumatic cylinders.

Leur fonction est d'assurer le réglage du débit dans un circuit pneumatique. Selon le réducteur employé, le réglage peut être effectué dans les deux sens (réducteur bidirectionel) ou dans un seul sens (réducteur unidirectionel). Le réducteur unidirectionel est très utilisé pour le réglage de la vitesse de sortie de tige du vérin pneumatique.

Das Drosselrückschlagventil regelt den Durchfluss in einer pneumatischen Anlage. Je nach dem Drosselventil, kann die Drosselung auf beiden Seiten (beidseitiges Drosselrückschlagventil) oder einfach auf einer Seite erfolgen. (einseitiges Rückschlagventil). Besonders geeignet ist das einseitige Drosselrückschlagventil für die Regulierung der Zylindergeschwindigkeit.

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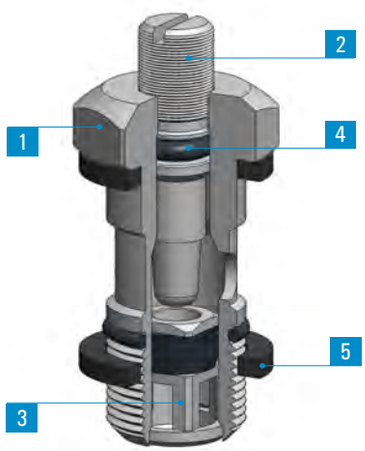
Regolatore di flusso | Flow control | Réducteur de débit | Drosselrückschlagventil

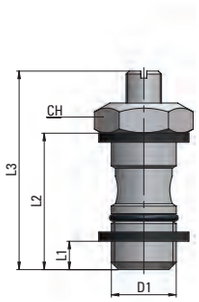
MV 15

1	2	3	4	5
Corpo Body Corps Körper	Spillo Needle Epingle Nadel	Bussola Cartridge Cartouche Patrone	Guarnizioni Seals Joint d'étancheité Dichtung	Rondelle Gasket Bague Plastique Kunststoffring
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt			NBR NBR NBR NBR	PA6 PA6 PA6 PA6

-20°C ÷ 80°C

0 ÷ 10 bar





Type	D1	L1	L2	L3 max	CH	g
15 00 M5	M5x0,8	4	15.2	25	8	4,8
15 00 18	G1/8	5.1	23.7	31.7	14	16,8
15 00 14	G1/4	6.7	27.2	39.5	17	32,4
15 00 38	G3/8	7.4	31	50	20	61
15 00 12	G1/2	9.9	37.9	60.7	26	106

Disponibile nelle versioni: Available as:

.../C

.../V

.../B

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato al regolatore.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the flow control.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
en fonction du raccord monté sur le réducteur.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
die Schläuche werden durch die am Drosselrückschlagventil montierte verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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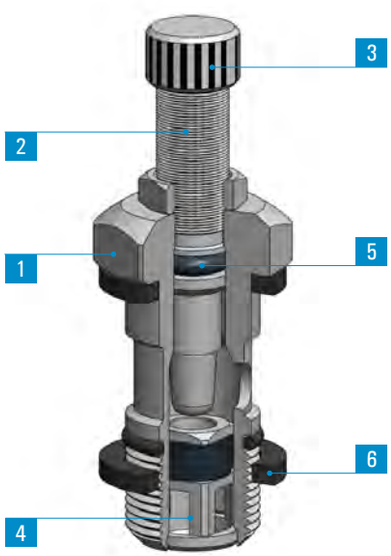
MV 16

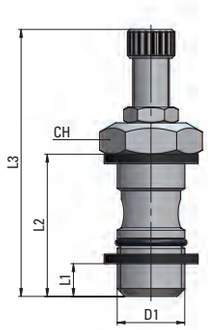
Regolatore di flusso con pomolo di regolazione | Flow control with handwheel | Réducteur de débit avec volant moleté | Drosselrückschlagventil mit Rändelkopf

1	2	3	4	5	6
Corpo Body Corps Körper	Spillo Needle Epingle Nadel	Pomolo Handwheel Volant moleté Rändelkopf	Bussola Cartridge Cartouche Patrone	Guarnizioni Seals Joint d'étancheité Dichtung	Rondelle Gasket Bague Plastique Kunststoffring
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt				NBR NBR NBR NBR	PA6 PA6 PA6 PA6

-20°C ÷ 80°C

0 ÷ 10 bar



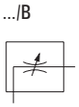


Type	D1	L1	L2	L3 max	CH	g
16 00 M5	**M5x0,8**	4	15.2	38.1	8	6,5
16 00 18	**G1/8**	5.1	23.7	42	14	20,2
16 00 14	**G1/4**	6.7	27.2	51	17	37,9
16 00 38	**G3/8**	7.4	31	63.5	20	73
16 00 12	**G1/2**	9.9	37.9	80.3	26	137,3

Disponibile nelle versioni: Available as:

.../C

.../V

.../B 

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato al regolatore.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the flow control.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
en fonction du raccord monté sur le réducteur.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
die Schläuche werden durch die am Drosselrückschlagventil montierte verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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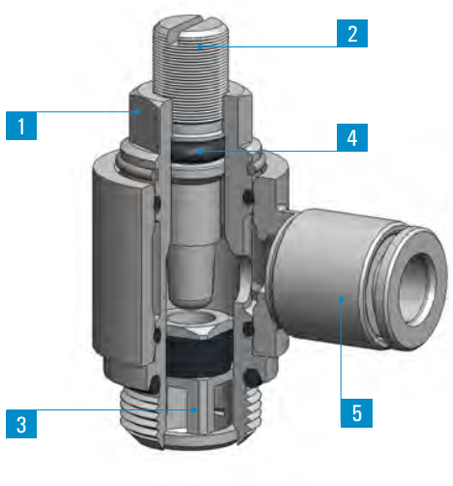
Regolatore con raccordo orientabile automatico in ottone | Brass flow control with swivelling push-in fitting | Réducteur de débit avec raccord automatique tournant en laiton | Drosselrückschlagventil mit schwenkbarer Steckverschraubung aus Messing

MV 18

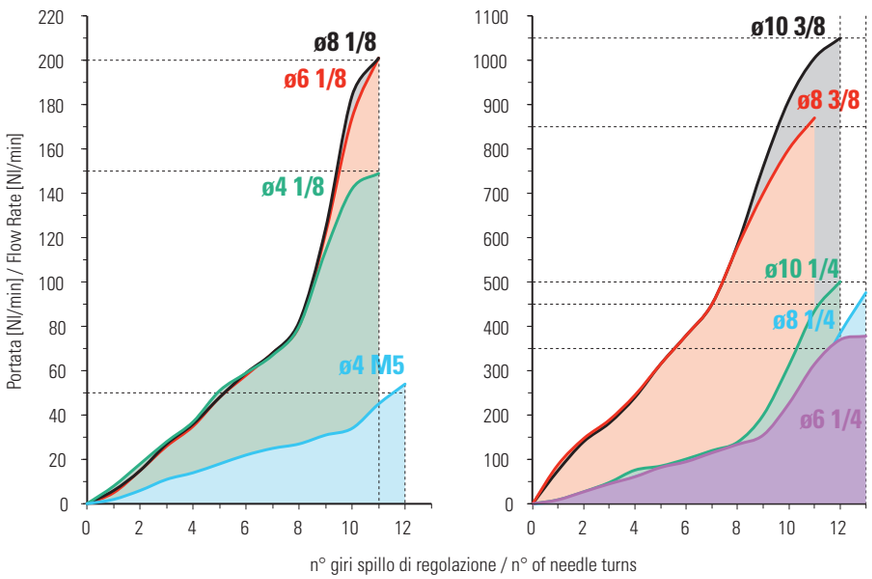
1	2	3	4	5
Corpo Body Corps Körper	Spillo Needle Epingle Nadel	Bussola Cartridge Cartouche Patrone	Guarnizioni Seals Joint d'étancheité Dichtung	Anello Banjo Ring Banjo Steckverschraubungen
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt			NBR NBR NBR NBR	Raccordo Automatico serie MA MA line push-in fittings Raccords instantanés série MA MA Steckverschraubungen

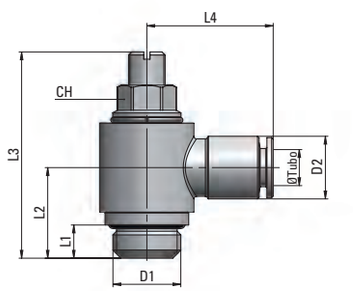
-20°C ÷ 80°C

0 ÷ 10 bar



P = 6 bar - Δp = 1 bar





Type	Ø Tubo	D1	D2	L1	L2	L3 max	L4	CH	g ⚖
18 04 M5	4	M5x0,8	9.1	4	12.5	25,5	18.5	6	13
18 04 18	4	G1/8	9.1	5.2	15.1	31.8	20.5	9	31
18 06 M5	6	M5x0,8	12	4	12.5	25,5	21.5	6	15.5
18 06 18	6	G1/8	12	5.2	15.1	31.8	22.5	9	35
18 06 14	6	G1/4	12	6.4	17.4	39.5	24	10	57
18 08 18	8	G1/8	14	5.2	15.1	31.8	23.5	9	32,5
18 08 14	8	G1/4	14	6.4	17.4	39.5	24.5	10	56
18 08 38	8	G3/8	14	7	20	50	26.5	14	90
18 10 14	10	G1/4	16	6.4	17.4	39.5	27	10	50
18 10 38	10	G3/8	16	7	20	50	29	14	91

Disponibile nelle versioni: Available as: .../C .../V .../B

L'anello rimane orientabile anche dopo l'installazione del regolatore.
The banjo ring swivels also after flow control installation.
Les banjos peuvent être orientés après l'installation du réducteur.
Der Schwenkring kann nach der Montage des Drosselrückschlagventiles noch orientiert werden.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Poliuretano PU
(98 Shore A)

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A).

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyurethan PU
(98 Shore A).

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

MV 41

Regolatore con raccordo orientabile automatico in ottone e pomolo di regolazione

Brass flow control with swivelling push-in fitting and handwheel

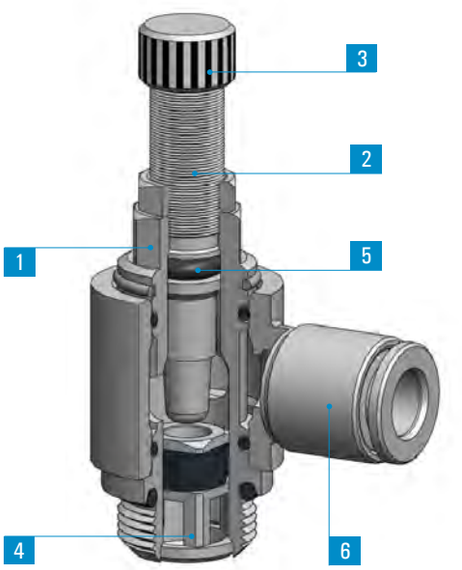
Réducteur de débit avec raccord automatique tournant en laiton et volant moleté

Messing Drosselrückschlagventil mit schwenkbarer Steckverschraubung und Rändelkopf

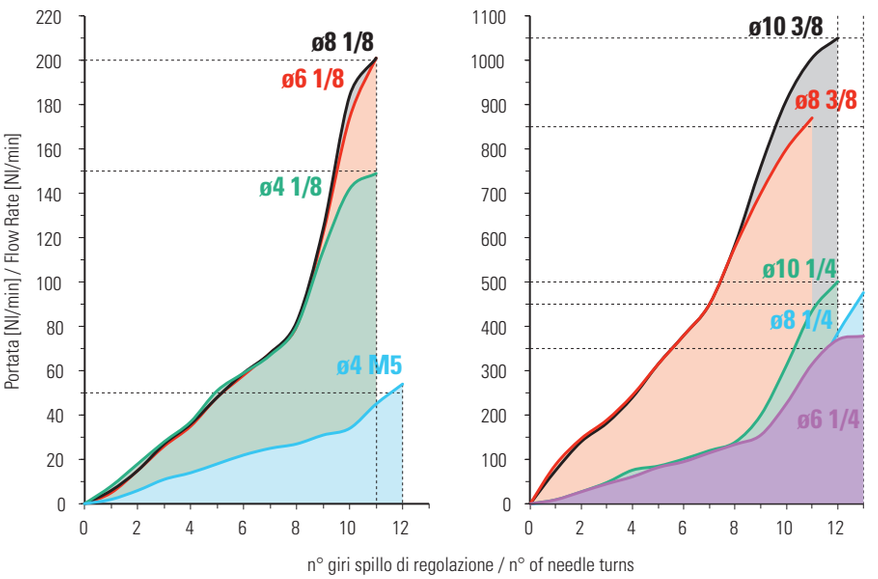
1	2	3	4	5	6
Corpo Body Corps Körper	Spillo Needle Epingle Nadel	Pomolo Handwheel Volant moleté Rändelkopf	Bussola Cartridge Cartouche Patrone	Guarnizioni Seals Joint d'étancheité Dichtung	Anello Banjo Ring Banjo Steckverschraubungen
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt				NBR NBR NBR NBR	Raccordo Automatico serie MA MA line push-in fittings Raccords instantanés série MA MA Steckverschraubungen

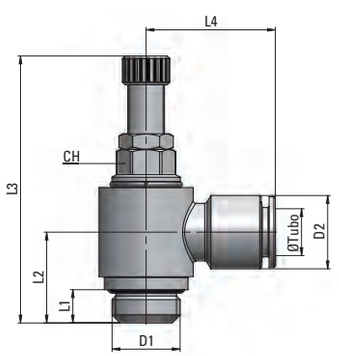
-20°C ÷ 80°C

0 ÷ 10 bar



P = 6 bar - Δp = 1 bar





Type	Ø Tubo	D1	D2	L1	L2	L3 max	L4	CH	g
41 04 M5	4	M5x0,8	9.1	4	12.5	39.4	18.5	6	15
41 04 18	4	G1/8	9.1	5.2	15.1	41.9	20.5	9	37
41 06 M5	6	M5x0,8	12	4	12.5	39.4	21.5	6	16.9
41 06 18	6	G1/8	12	5.2	15.1	41.9	22.5	9	41
41 06 14	6	G1/4	12	6.4	17.4	50.8	24	10	63
41 08 18	8	G1/8	14	5.2	15.1	41.9	23.5	9	45
41 08 14	8	G1/4	14	6.4	17.4	50.8	24.5	10	62
41 08 38	8	G3/8	14	7	20	63.5	26.5	14	103
41 10 14	10	G1/4	16	6.4	17.4	50.8	27	10	93
41 10 38	10	G3/8	16	7	20	63.5	29	14	104

Disponibile nelle versioni: Available as:

.../C

.../V

.../B

L'anello rimane orientabile anche dopo l'installazione del regolatore.
The banjo ring swivels also after flow control installation.
Les banjos peuvent être orientés après l'installation du réducteur.
Der Schwenkring kann nach der Montage des Drosselrückschlagventiles noch orientiert werden.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Poliuretano PU
(98 Shore A)

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyurethan PU
(98 Shore A)

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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Regolatore con raccordo orientabile automatico in resina acetalica

Flow control with swivelling acetal push-in fitting

Réducteur de débit avec raccord automatique tournant en résine acétal

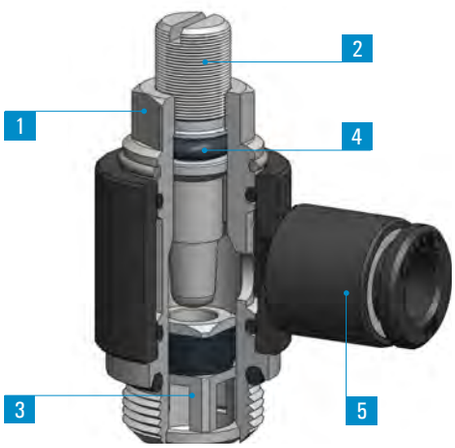
Drosselrückschlagventil mit schwenkbarer Steckverschraubung aus Kunststoff

MV 38

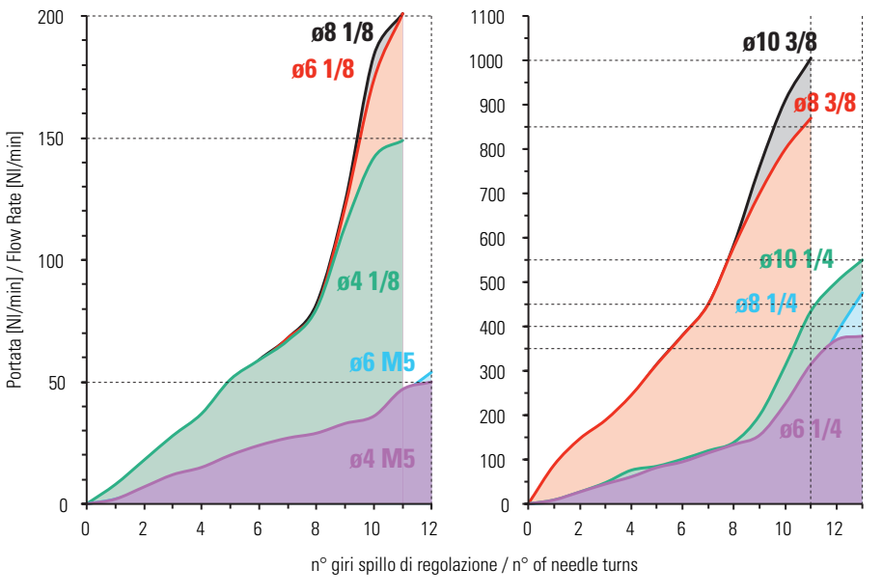
1	2	3	4	5
Corpo Body Corps Körper	Spillo Needle Epingle Nadel	Bussola Cartridge Cartouche Patrone	Guarnizioni Seals Joint d'étancheité Dichtung	Anello Banjo Ring Banjo Steckverschraubungen
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt			NBR NBR NBR NBR	Raccordo Automatico serie MB MB line push-in fittings Raccords instantanés série MB MB Steckverschraubungen

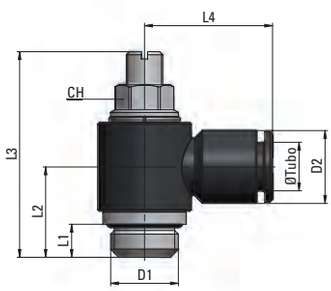
-20°C ÷ 70°C

0 ÷ 10 bar



P = 6 bar - Δp = 1 bar





Type	Ø Tubo	D1	D2	L1	L2	L3 max	L4	CH	g
38 04 M5	4	M5x0,8	9,7	4	12	25,5	17.6	6	8
38 04 18	4	G1/8	9,7	5.2	15.1	31.8	19.1	9	17
38 06 M5	6	M5x0,8	12	4	11,5	25,5	21.5	6	9
38 06 18	6	G1/8	12	5.2	15.1	31.8	22.7	9	18
38 06 14	6	G1/4	12	6.4	17.4	39.5	24.3	10	31
38 08 18	8	G1/8	14	5.2	14.9	31.8	23	9	20
38 08 14	8	G1/4	14	6.4	17.4	39.5	24.6	10	32
38 08 38	8	G3/8	14	7	20	50	26.5	14	59
38 10 14	10	G1/4	16	6.4	17.4	39.5	27	10	33
38 10 38	10	G3/8	16	7	20	50	28.5	14	60

Disponibile nelle versioni: Available as:

.../C

.../V

.../B

L'anello rimane orientabile anche dopo l'installazione del regolatore.
The banjo ring swivels also after flow control installation.
Les banjos peuvent être orientés après l'installation du réducteur.
Der Schwenkring kann nach der Montage des Drosselrückschlagventiles noch orientiert werden.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Poliuretano PU
(98 Shore A)

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A).

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyurethan PU
(98 Shore A).

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

MV 36

Regolatore con raccordo orientabile automatico in resina acetalica e pomolo di regolazione

Flow control with swivelling acetal push-in fitting and handwheel

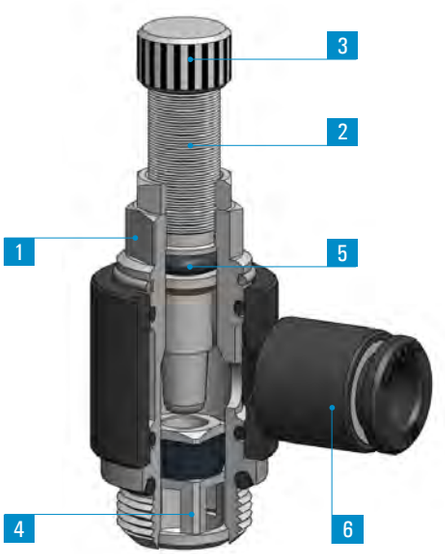
Réducteur de débit avec raccord automatique tournant en résine acétal et volant moleté

Drosselrückschlagventil mit schwenkbarer Steckverschraubung aus Kunststoff und Rändelkopf

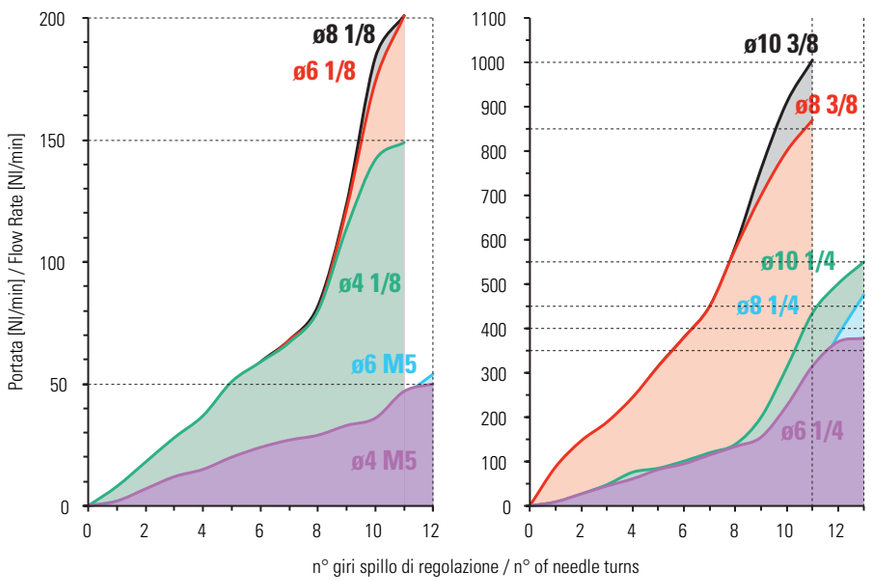
1	2	3	4	5	6
Corpo Body Corps Körper	Spillo Needle Epingle Nadel	Pomolo Handwheel Volant moleté Rändelkopf	Bussola Cartridge Cartouche Patrone	Guarnizioni Seals Joint d'étancheité Dichtung	Anello Banjo Ring Banjo Steckverschraubungen
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt				NBR NBR NBR NBR	Raccordo Automatico serie MB MB line push-in fittings Raccords instantanés série MB MB Steckverschraubungen

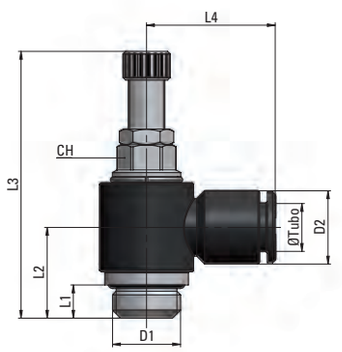
-20°C ÷ 70°C

0 ÷ 10 bar



P = 6 bar - Δp = 1 bar





Type	Ø Tubo	D1	D2	L1	L2	L3 max	L4	CH	g
36 04 M5	4	M5x0,8	9,7	4	12	39.4	17.6	6	10
36 04 18	4	G1/8	9,7	5.2	15.1	41.9	19.1	9	20
36 06 M5	6	M5x0,8	12	4	11,5	39.4	21.5	6	11
36 06 18	6	G1/8	12	5.2	15.1	41.9	22.7	9	21
36 06 14	6	G1/4	12	6.4	17.4	50.8	24.3	10	34
36 08 18	8	G1/8	14	5.2	14.9	41.9	23	9	23
36 08 14	8	G1/4	14	6.4	17.4	50.8	24.6	10	35
36 08 38	8	G3/8	14	7	20	63.5	26.5	14	72
36 10 14	10	G1/4	16	6.4	17.4	50.8	27	10	36
36 10 38	10	G3/8	16	7	20	63.5	28.5	14	73

Disponibile nelle versioni: Available as:

.../C

.../V

.../B

L'anello rimane orientabile anche dopo l'installazione del regolatore.
The banjo ring swivels also after flow control installation.
Les banjos peuvent être orientés après l'installation du réducteur.
Der Schwenkring kann nach der Montage des Drosselrückschlagventiles noch orientiert werden.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Poliuretano PU
(98 Shore A)

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyurethan PU
(98 Shore A)

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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Regolatore con raccordo automatico in resina acetalica

Flow control with acetal push-in fitting

Réducteur de débit avec raccord automatique en résine acétal

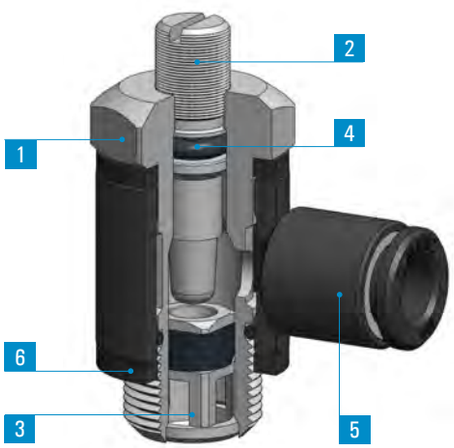
Drosselrückschlagventil mit Steckverschraubung aus Kunststoff

MV 39

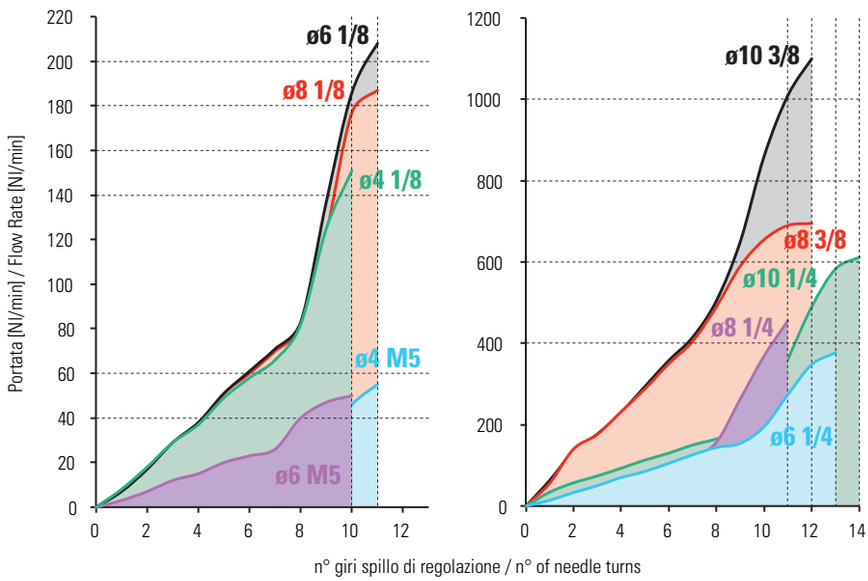
1	2	3	4	5	6
Corpo Body Corps Körper	Spillo Needle Epingle Nadel	Bussola Cartridge Cartouche Patrone	Guarnizioni Seals Joint d'étancheité Dichtung	Anello Banjo Ring Banjo Steckverschraubungen	Rondelle Gasket Bague Plastique Kunststoffring
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt			NBR NBR NBR NBR	Raccordo Automatico serie MB MB line push-in fittings Raccords instantanés série MB MB Steckverschraubungen	PA6 PA6 PA6 PA6

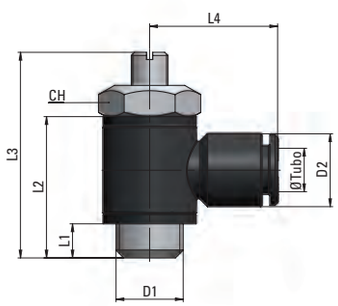
-20°C ÷ 70°C

0 ÷ 10 bar



P = 6 bar - Δp = 1 bar





Type	Ø Tubo	D1	D2	L1	L2	L3 max	L4	CH	g
39 04 M5	4	M5x0,8	9,7	4	15.2	25	17.6	8	7
39 04 18	4	G1/8	9,7	5.1	23.7	31.7	19.1	14	20
39 06 M5	6	M5x0,8	12	4	15.2	25	21.5	8	8
39 06 18	6	G1/8	12	5.1	23.7	31.7	22.7	14	21
39 06 14	6	G1/4	12	6.7	27.2	39.5	24.3	17	38
39 08 18	8	G1/8	14	5.1	23.7	31.7	23	14	22
39 08 14	8	G1/4	14	6.7	27.2	39.5	24.6	17	39
39 08 38	8	G3/8	14	7.4	31	50	26.5	20	67
39 10 14	10	G1/4	16	6.7	27.2	39.5	27	17	39
39 10 38	10	G3/8	16	7.4	31	50	28.5	20	68

Disponibile nelle versioni: Available as:

.../C

.../V

.../B

Una volta effettuata l'installazione del regolatore l'anello non è più orientabile.
The banjo ring no longer swivel after flow control installation.
Les banjos ne tournent pas après l'installation du réducteur.
Der Schwenkring bleibt nach der Montage des Drosselrückschlagventiles fest.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Poliuretano PU
(98 Shore A)

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A).

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyurethan PU
(98 Shore A).

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

MV 37

Regolatore con raccordo automatico in resina acetalica e pomolo di regolazione

Flow control with acetal push-in fitting and handwheel

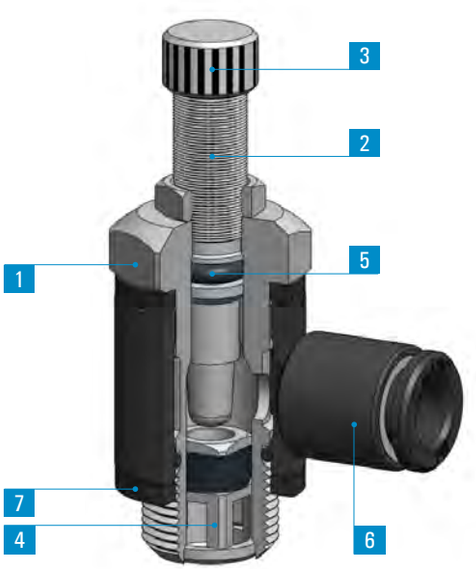
Réducteur de débit avec raccord automatique en résine acétal et volant moleté

Drosselrückschlagventil mit Steckverschraubung aus Kunststoff und Rändelkopf

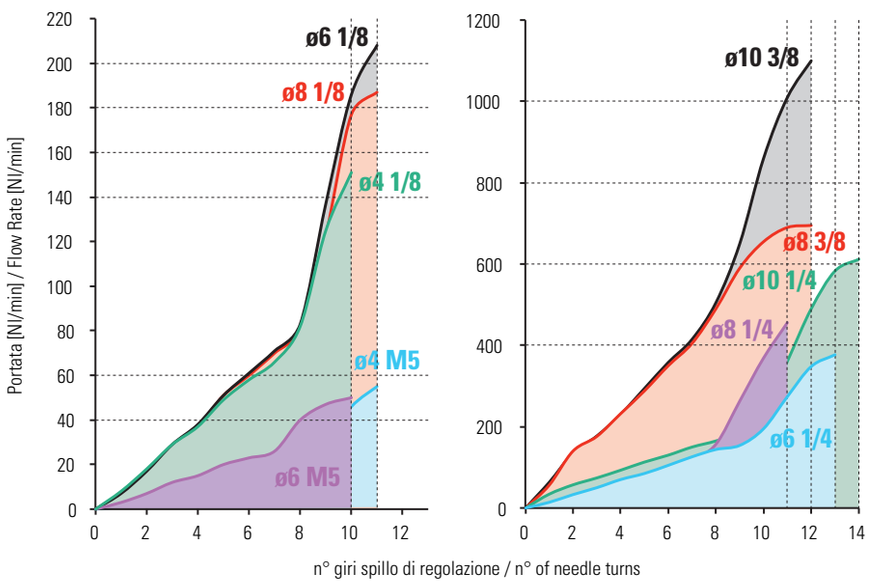
1	2	3	4	5	6	7
Corpo Body Corps Körper	Spillo Needle Epingle Nadel	Pomolo Handwheel Volant moleté Rändelkopf	Bussola Cartridge Cartouche Patrone	Guarnizioni Seals Joint d'étancheité Dichtung	Anello Banjo Ring Banjo Steckverschraubungen	Rondelle Gasket Bague Plastique Kunststoffring
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt				NBR NBR NBR NBR	Raccordo Automatico serie MB MB line push-in fittings Raccords instantanés série MB MB Steckverschraubungen	PA6 PA6 PA6 PA6

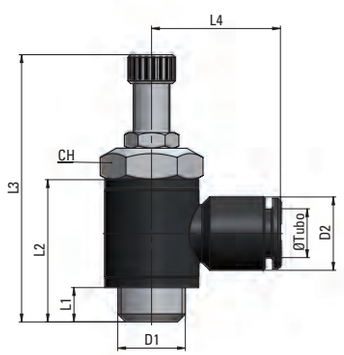
-20°C ÷ 70°C

0 ÷ 10 bar



P = 6 bar - Δp = 1 bar





Type	Ø Tubo	D1	D2	L1	L2	L3 max	L4	CH	g
37 04 M5	4	M5x0,8	9,7	4	15.2	38.1	17.6	8	9
37 04 18	4	G1/8	9,7	5.1	23.7	42	19.1	14	23
37 06 M5	6	M5x0,8	12	4	15.2	38.1	21.5	8	10
37 06 18	6	G1/8	12	5.1	23.7	42	22.7	14	25
37 06 14	6	G1/4	12	6.7	27.2	51	24.3	17	41
37 08 18	8	G1/8	14	5.1	23.7	42	23	14	25
37 08 14	8	G1/4	14	6.7	27.2	51	24.6	17	42
37 08 38	8	G3/8	14	7.4	31	63.5	26.5	20	70
37 10 14	10	G1/4	16	6.7	27.2	51	27	17	42
37 10 38	10	G3/8	16	7.4	31	63.5	28.5	20	71

Disponibile nelle versioni: Available as:

.../C

.../V

.../B

Una volta effettuata l'installazione del regolatore l'anello non è più orientabile.
The banjo ring no longer swivel after flow control installation.
Les banjos ne tournent pas après l'installation du réducteur.
Der Schwenkring bleibt nach der Montage des Drosselrückschlagventiles fest.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Poliuretano PU
(98 Shore A)

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyurethan PU
(98 Shore A)

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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Regolatore con raccordo orientabile automatico in resina acetalica e pomolo di regolazione

Flow control with swivelling acetal push-in fitting and handwheel

Réducteur de débit avec raccord automatique tournant en résine acétal et volant moleté

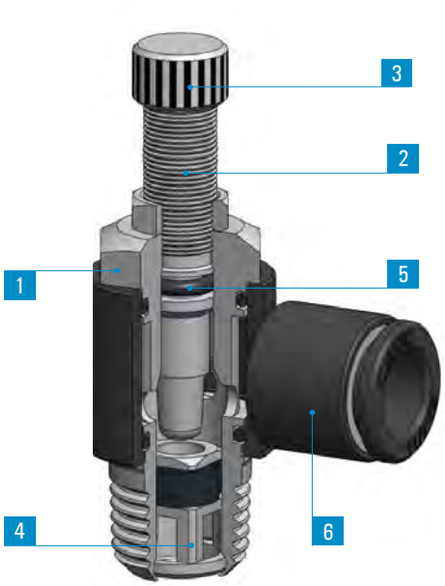
Drosselrückschlagventil mit schwenkbarer Steckverschraubung aus Kunststoff und Rändelkopf

MV 19

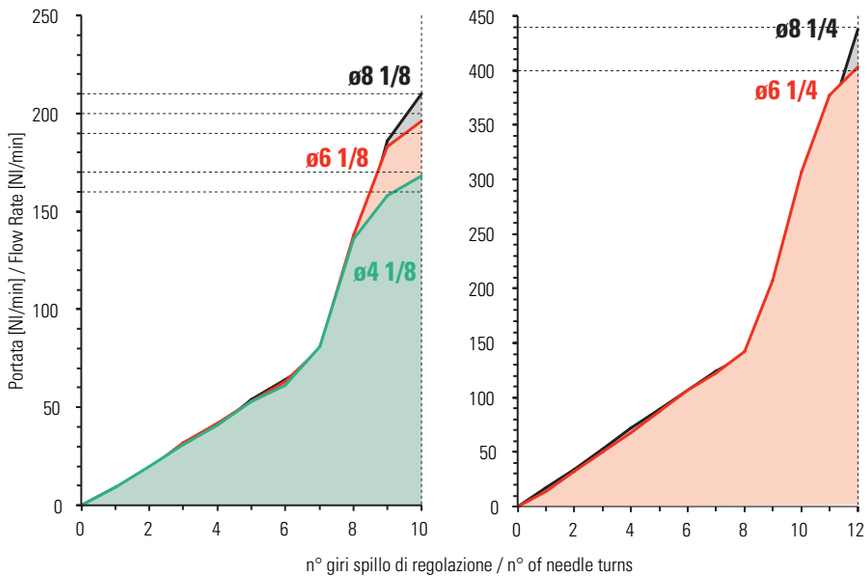
1	2	3	4	5	6
Corpo Body Corps Körper	Spillo Needle Epingle Nadel	Pomolo Handwheel Volant moleté Rändelkopf	Bussola Cartridge Cartouche Patrone	Guarnizioni Seals Joint d'étancheité Dichtung	Anello Banjo Ring Banjo Steckverschraubungen
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt				NBR NBR NBR NBR	Raccordo Automatico serie MB MB line push-in fittings Raccords instantanés série MB MB Steckverschraubungen

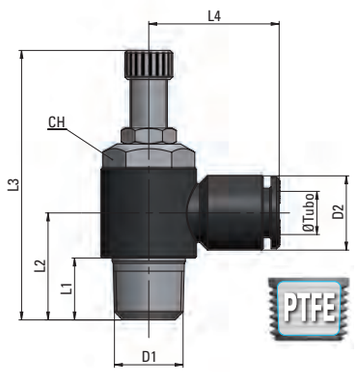
-20°C ÷ 70°C

0 ÷ 10 bar



P = 6 bar - Δp = 1 bar





Type	Ø Tubo	D1	D2	L1	L2	L3 max	L4	CH	g
19 04 18	4	R1/8	10	8,6	16,1	42	19.1	12	19
19 06 18	6	R1/8	12	8,6	16,1	42	22.7	12	19,4
19 06 14	6	R1/4	12	11,7	20,2	51	24.3	15	35,2
19 08 18	8	R1/8	14	8,6	16,1	42	23	12	19,7
19 08 14	8	R1/4	14	11,7	20,2	51	24.6	15	35,5

Disponibile nelle versioni: Available as:

.../C .../V .../B

L'anello rimane orientabile anche dopo l'installazione del regolatore.
The banjo ring swivels also after flow control installation.
Les banjos peuvent être orientés après l'installation du réducteur.
Der Schwenkring kann nach der Montage des Drosselrückschlagventiles noch orientiert werden.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Poliuretano PU
(98 Shore A)

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyurethan PU
(98 Shore A)

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

MV 28

Regolatore con raccordo a gomito orientabile

Flow control with swivelling outlet

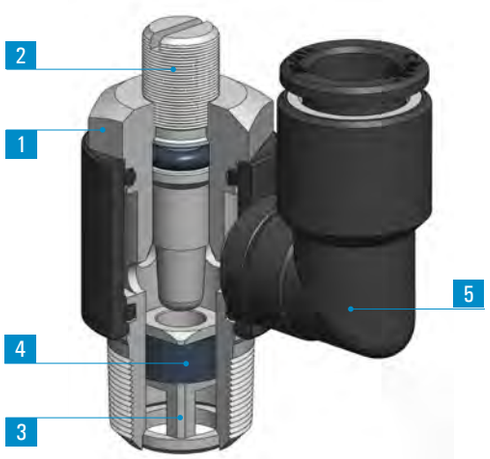
Réducteur de débit avec sortie banjo orientable

Drosselrückschlagventil mit schwenkbarem Ringstückanschluß

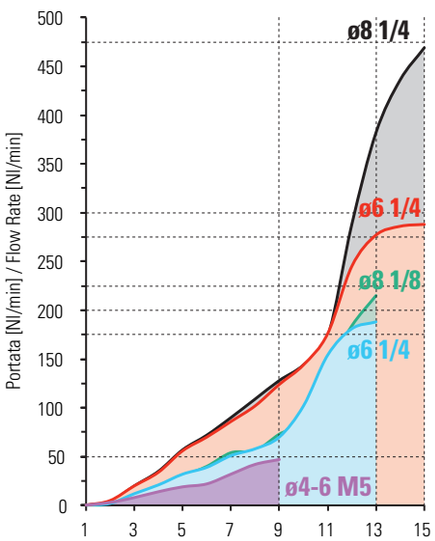
1	2	3	4	5
Corpo Body Corps Körper	Spillo Needle Epingle Nadel	Bussola Cartridge Cartouche Patrone	Guarnizioni Seals Joint d'étancheité Dichtung	Anello Banjo Ring Banjo Steckverschraubungen
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt			NBR NBR NBR NBR	Raccordo Automatico serie MB MB line push-in fittings Raccords instantanés série MB MB Steckverschraubungen

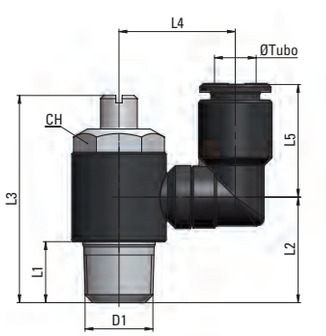
-20°C ÷ 70°C

0 ÷ 10 bar



P = 6 bar - **Δ**p = 1 bar





Type	Ø Tubo	D1	L1	L2	L3 max	L4	L5	CH	g
28 04 M5	**4**	**M5x0,8**	4.1	10.1	22	14.9	15.5	8	8,3
28 06 M5	**6**	**M5x0,8**	4.1	10.1	22	16.9	19.7	8	10,7
28 06 18	**6**	**R1/8**	8.9	15.9	32	19.8	19.7	12	21,9
28 06 14	**6**	**R1/4**	11.7	20.2	39.6	21	19.7	15	37,2
28 08 18	**8**	**R1/8**	8.9	15.9	32	20.5	21.5	12	23,8
28 08 14	**8**	**R1/4**	11.7	20.2	39.6	22,2	21.5	15	39,2

Disponibile nelle versioni: Available as:

.../C

.../V

.../B

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Poliuretano PU
(98 Shore A)

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A).

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyurethan PU
(98 Shore A).

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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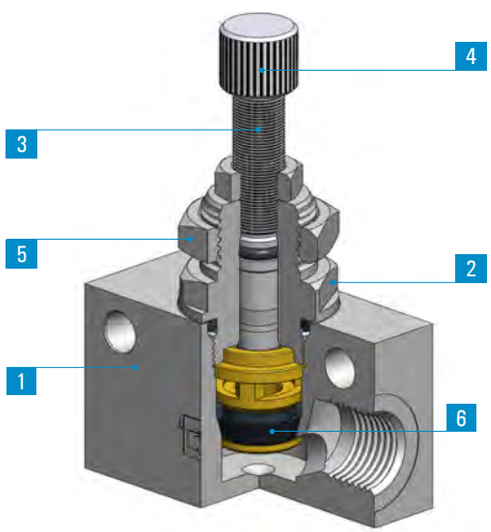
MV 21

Regolatore di flusso in linea | In-line flow control | Réducteur de débit en ligne | Drosselrückschlagventil

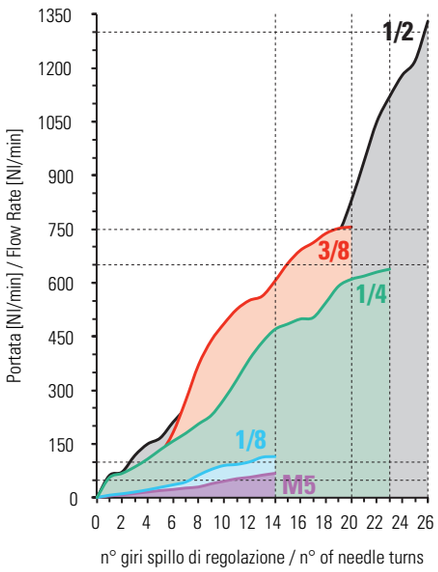
1	2	3	4	5	6
Corpo Body Corps Körper	Regolatore Valve Réducteur de débit Drosselventil	Spillo Needle Epingle Nadel	Pomolo Handwheel Volant moleté Rändelkopf	Dado Nut Ecrou Überwurfmutter	Guarnizioni Seals Joint d'étancheité Dichtung
Alluminio anodizzato Al2011 Anodized aluminium Al2011 Alluminium anodisé Al2011 Eloxiertes Aluminium Al2011	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt				NBR NBR NBR NBR

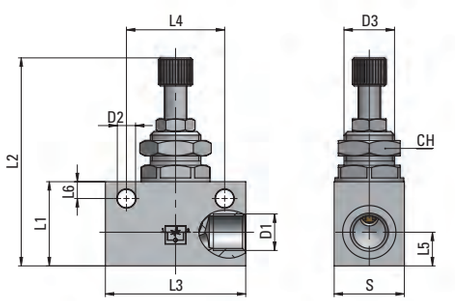
-20°C ÷ 80°C

0 ÷ 10 bar



P = 6 bar - **Δ**p = 1 bar





Type	D1	D2	D3	L1	L2 max	L3	L4	L5	S	CH	g
21 00 M5	**M5x0,8**	3,2	M9x0,75	15	36.2	25	18	7	12	11	20
21 00 18	**G1/8**	4,5	M12x0,75	21	49.3	34	24	8	16	15	50
21 00 14	**G1/4**	6,5	M18x1,5	30	75.2	50	35	12	25	22	162
21 00 38	**G3/8**	6,5	M18x1,5	30	75.2	58	40	12	25	22	171
21 00 12	**G1/2**	6,5	M22x1,5	40	92.9	65	50	17	30	26	299

Disponibile nelle versioni: Available as:

.../U

.../B

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato al regolatore.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the flow control.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
en fonction du raccord monté sur le réducteur.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
die Schläuche werden durch die am Drosselrückschlagventil montierte.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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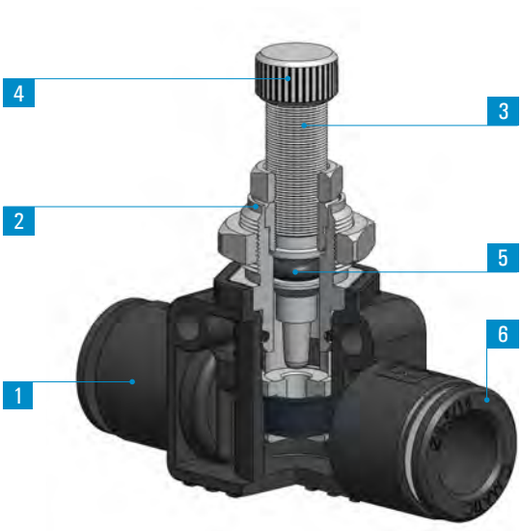
Regolatore di flusso con corpo in resina acetalica | Acetal in-line flow control | Réducteur de débit avec corps résine acetal | Kunststoff Drosselrückschlagventil

MV 34

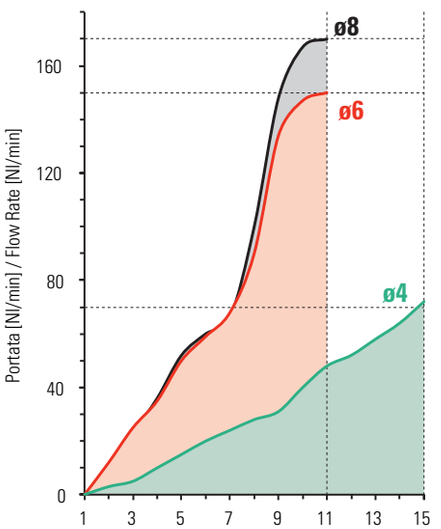
1	2	3	4	5	6
Corpo Body Corps Körper	Regolatore Valve Réducteur de débit Drosselventil	Spillo Needle Epingle Nadel	Pomolo Handwheel Volant moleté Rändelkopf	Guarnizioni Seals Joint d'étancheité Dichtung	Raccordi Fittings Raccords Steckverschraubungen
POM POM POM POM	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt			NBR NBR NBR NBR	Raccordo Automatico serie MB MB line push-in fittings Raccords instantanés série MB MB Steckverschraubungen

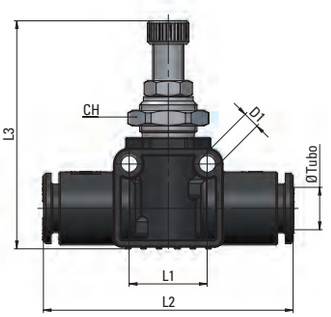
-20°C ÷ 70°C

0 ÷ 10 bar



P = 6 bar - **Δ**p = 1 bar





Type	Ø Tubo	D1	L1	L2	L3 max	CH	g ⚖
34 04 04	**4**	3,2	13	36.4	35.9	11	11,8
34 06 06	**6**	3,2	16	47	42.3	14	24
34 08 08	**8**	3,2	16	48	43.8	14	28

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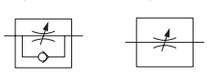


SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Poliuretano PU
(98 Shore A)

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A).

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyurethan PU
(98 Shore A).

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

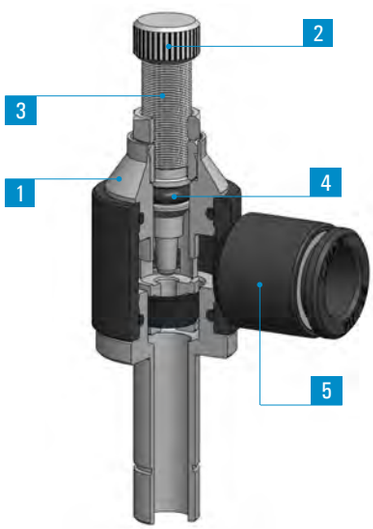
Regolatore di flusso con codulo | Plug-in flow control | Réducteur de débit à broche encliquétable | Drosselrückschlagventil mit Steckzapfen

MV 43

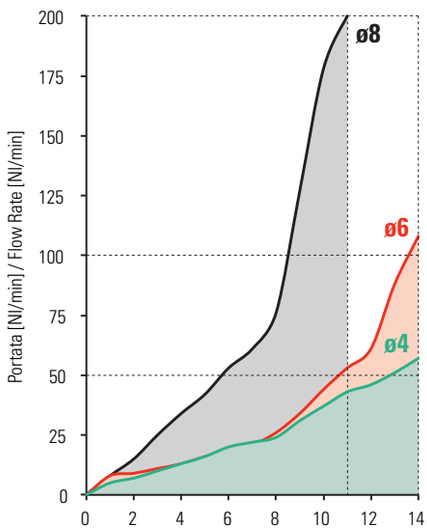
1	2	3	4	5
Corpo Body Corps Körper	Pomolo Handwheel Volant moleté Rändelkopf	Spillo Needle Epingle Nadel	Guarnizioni Seals Joint d'étancheité Dichtung	Anello Banjo Ring Banjo Steckverschraubungen
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt			NBR NBR NBR NBR	Raccordo Automatico serie MB MB line push-in fittings Raccords instantanés série MB MB Steckverschraubungen

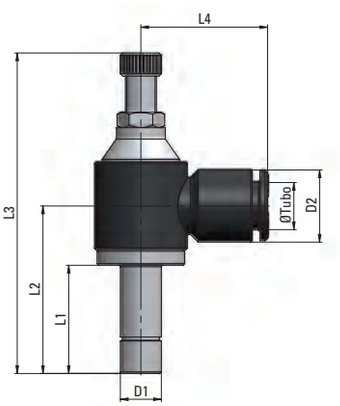
-20°C ÷ 70°C

0 ÷ 10 bar



P = 6 bar - **Δ**p = 1 bar





Type	Ø Tubo	D1	D2	L1	L2	L3 max	L4	g
43 04 04	**4**	4	10	16	31	58.5	17.6	12
43 06 06	**6**	6	12	20	29.5	55.4	22.7	19
43 08 08	**8**	8	14	21	32.5	62.5	24.6	35

Disponibile nelle versioni: Available as:

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.../V

.../B

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Poliuretano PU
(98 Shore A)

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyurethan PU
(98 Shore A)

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

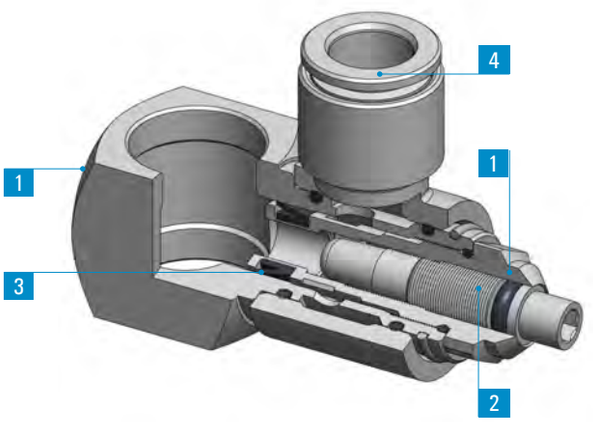
MV 49

Regolatore di flusso ad anello | Banjo with integrated flow control | Banjo avec limiteur de débit intégré | Schwenkring mit integriertem Rückschlagventil

1	2	3	4
Corpo Body Corps Körper	Spillo Needle Epingle Nadel	Guarnizioni Seals Joint d'étancheité Dichtung	Raccordo Automatico Push-in fittings Raccords instantanés Steckverschraubungen
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt		NBR NBR NBR NBR	Raccordo Automatico serie MA MA line push-in fittings Raccords instantanés série MA MA Steckverschraubungen

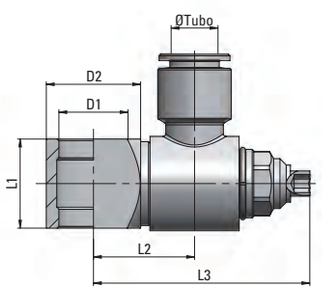
-20°C ÷ 80°C

0 ÷ 10 bar



Controlled Pneumatic Switch

Controlled Stop Valve



Type	Ø Tubo	D1	D2	L1	L2	L3 max	g
49 06 14	**6**	1/4	18	17	19.3	41.3	66
49 08 14	**8**	1/4	18	17	19.3	41.3	66
49 08 38	**8**	3/8	21	20	22	51.2	110
49 10 38	**10**	3/8	21	20	22	51.2	110

Disponibile nelle versioni:
Available as:

.../C

.../V

.../B

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Poliuretano PU
(98 Shore A)

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A).

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyurethan PU
(98 Shore A).

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

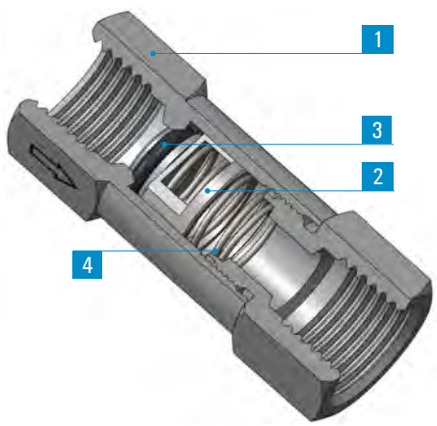
trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

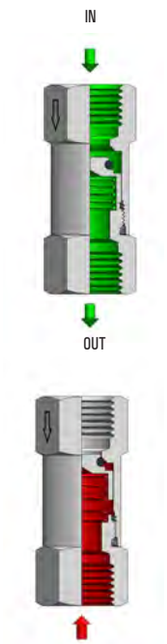
Valvola di non ritorno | Check valve | Clapet anti-retour | Rückschlagventil

MV 23

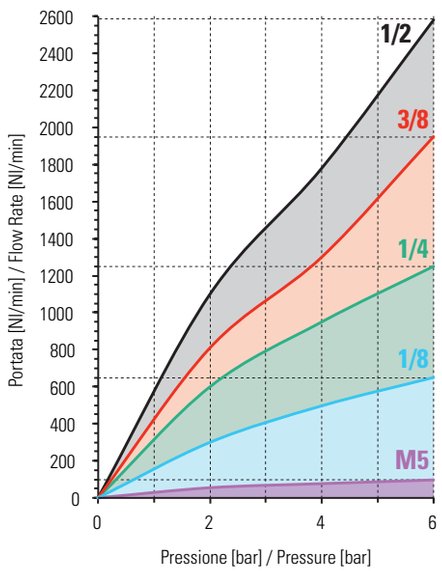
1	2	3	4
Corpo Body Corps Körper	Otturatore Valve Clapet Ventil	Guarnizioni Seals Joint d'étancheité Dichtung	Molla Spring Ressort Feder
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt		NBR NBR NBR NBR	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302

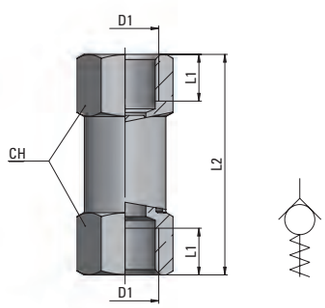
-20°C ÷ 80°C | 2 ÷ 10 bar | 0,2 bar





P = 6 bar - Δp = 1 bar





Type	D1	L1	L2	CH	g
23 00 M5	M5x0,8	6	25	8	7,2
23 00 18	G1/8	8	36,5	13	25,8
23 00 14	G1/4	9	42,5	16	38,3
23 00 38	G3/8	10,5	51	20	72
23 00 12	G1/2	12,5	62	24	120

Queste valvole permettono il passaggio dell'aria in un unico senso (indicato sul corpo della valvola da una freccia) impedendolo in senso contrario.

The flow is allowed only in one way (the arrow direction engraved on the body) and stopped in the reverse way.

Il permet le passage du débit dans un seul sens (celui marqué sur le corps de la vanne par une flèche) tout en empêchant son retour dans le sens contraire.

Der Durchfluss wird nur einseitig erlaubt. Im Allgemeinen ist es die Richtung entsprechend dem auf dem Rückschlagventilskörper gekennzeichneten Pfeil. Die andere Seite bleibt abgesperrt.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato alla valvola.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the valve.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
en fonction du raccord monté sur la vanne.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Die Schläuche werden durch die am Schnellentlüftungsventil montierte Verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

MV 33

Raccordo diritto con valvola di non ritorno

Straight connection with check valve

Union simple avec clapet anti-retour

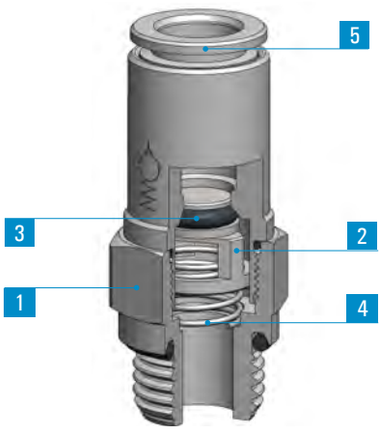
Gerade Verschraubung mit Rückschlagventil

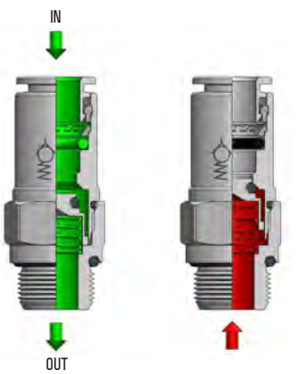
1	2	3	4	5
Corpo Body Corps Körper	Otturatore Valve Clapet Ventil	Guarnizioni Seals Joint d'étancheité Dichtung	Molla Spring Ressort Feder	Raccordo Automatico Push-in fittings Raccords instantanés Steckverschraubungen
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt		NBR NBR NBR NBR	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	Raccordo Automatico serie MA MA line push-in fittings Raccords instantanés série MA MA Steckverschraubungen

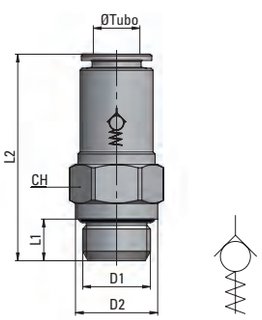
-20°C ÷ 80°C

2 ÷ 10 bar

0,2 bar







Type	Ø Tubo	D1	D2	L1	L2	CH	g
33 04 M5	**4**	**M5x0,8**	8	4	37.2	9	10
33 04 18	**4**	**G1/8**	13	6	30.9	11	13
33 06 18	**6**	**G1/8**	13	6	38	13	18
33 06 14	**6**	**G1/4**	16	8	39	14	26
33 08 18	**8**	**G1/8**	13	6	38.5	15	23
33 08 14	**8**	**G1/4**	16	8	39.5	16	27
33 10 14	**10**	**G1/4**	16	8	44	18	36
33 10 38	**10**	**G3/8**	20	9	43.5	18	42
33 12 12	**12**	**G1/2**	25	10	46.5	22	68
33 14 12	**14**	**G1/2**	25	10	54.7	25	90

Queste valvole permettono il passaggio dell'aria in un unico senso (indicato sul corpo della valvola da una freccia) impedendolo in senso contrario.

The flow is allowed only in one way (the arrow direction engraved on the body) and stopped in the reverse way.

Il permet le passage du débit dans un seul sens (celui marqué sur le corps de la vanne par une flèche) tout en empêchant son retour dans le sens contraire.

Der Durchfluss wird nur einseitig erlaubt. Im Allgemeinen ist es die Richtung entsprechend dem auf dem Rückschlagventilskörper gekennzeichneten Pfeil. Die andere Seite bleibt abgesperrt.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Poliuretano PU
(98 Shore A)

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyurethan PU
(98 Shore A)

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

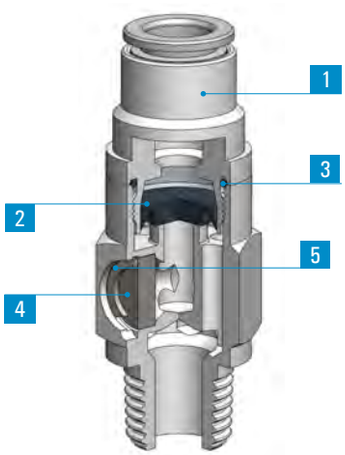
Valvola di scarico rapido in linea | Line quick exhaust valve | Clapet anti-retour | Schnellentlüftungsventil in Linie

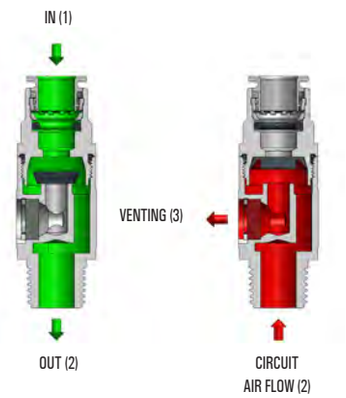
MV 22

1	2	3	4	5
Corpo Body Corps Körper	Guarnizione a labbro Lip ring Joint à lévre Lippendichtung	Guarnizioni Seals Joint d'étancheité Dichtung	Silenziatore Muffler Silencieux Schalldämpfer	Seeger
Alluminio Anodizzato Al2011 Anodised Aluminium Al2011 Aluminium Anodisé Al2011 Eloxiertes Aluminium Al2011	PU - NBR solo per 1/4 PU - NBR only for 1/4 PU - NBR seulement pour 1/4 PU - NBR nur bei 1/4	NBR NBR NBR NBR	Acciaio Inox AISI 316 Stainless Steel AISI 316 Acier Inox AISI 316 Edelstahl AISI 316	Acciao C75 Zincato C75 Steel zinc coated Acier C75 zingué C75 Stahl verzinkt

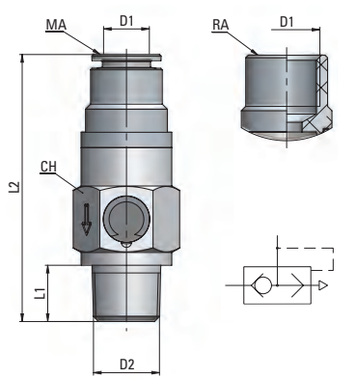
-20°C ÷ 80°C

2 ÷ 10 bar





Portata a 6 bar Flow rate at 6 bar Débit à 6 bar Druckfluß (6 bar)	IN OUT 1→2	OUT VENT 2→3
1/4	1050 Nl/min	660 Nl/min
3/8	3000 Nl/min	1900 Nl/min
1/2	3420 Nl/min	2280 Nl/min



Type	D_1	D_2	L_1	L_2	CH	g
22 08 14 -MA	**8**	**R1/4**	11	52	18	18,2
22 14 14 -RA	**G1/4**	**R1/4**	11	49	18	17,5
22 10 38 -MA	**10**	**R3/8**	11,5	64.5	27	47
22 38 38 -RA	**G3/8**	**R3/8**	11,5	59.5	27	47,5
22 12 12 -MA	**12**	**R1/2**	14	76	34	84
22 12 12 -RA	**G1/2**	**R1/2**	14	69.5	34	87,5

Valvola in grado di scaricare rapidamente l'aria contenuta in un circuito in caso di mancanza d'alimentazione; se applicate ad un cilindro permettono di aumentarne la velocità.

This valve can easily vent the circuit in case of an air supply failure. If assembled on the cylinder port, it increases the cylinder speed.

Cette vanne permet de mettre à l'échappement un circuit en cas de défaut d'alimentation. Raccordée sur un vérin, elle permet d'augmenter la vitesse du débit d'échappement et de ce fait d'augmenter sa vitesse de fonctionnement.

Dieses Ventil kann bei Luftmangel die Anlage schnell entlüften. Wenn am Zylinderausgang montiert, wird dessen Geschwindigkeit vergrössert.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Poliuretano PU
(98 Shore A)
Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)
Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A).
Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyurethan PU
(98 Shore A).
Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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MV 27

Valvola di scarico rapido | Quick exhaust valve | Vanne à échappement rapide | Schnellentlüftungsventil

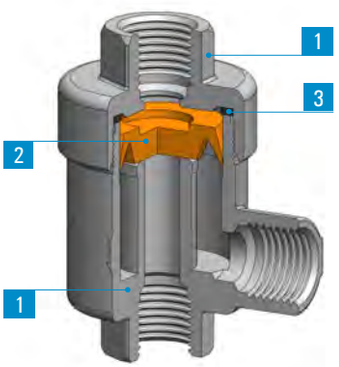
1	2	3
Corpo Body Corps Körper	Guarnizione a labbro Lip ring Joint à lévre Lippendichtung	Rondelle Gasket Bague Plastique Kunststoffring
Ottone UNI EN 12165 CW617N Nichelato Brass UNI EN 12165 CW617N Nickel plated Laiton UNI EN 12165 CW617N Nickelé Messing UNI EN 12165 CW617N vernickelt	PU - NBR solo per M5 PU - NBR only for M5 PU - NBR seulement pour M5 PU - NBR nur bei M5	PA6 PA6 PA6 PA6

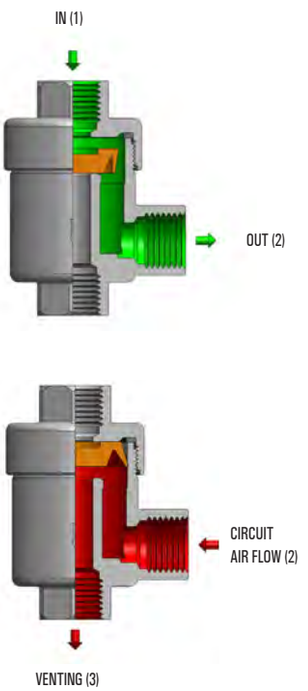
-20°C ÷ 80°C

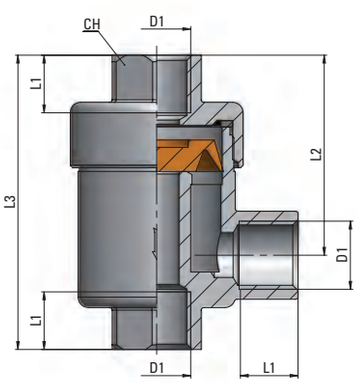
2 ÷ 10 bar

Portata Flow rate Débit Druckfluß (6 bar - Δp = 1bar)	IN OUT 1→2	OUT VENT 2→3
M5	133 Nl/min	150 Nl/min
1/8	450 Nl/min	760 Nl/min
1/4	780 Nl/min	1840 Nl/min
3/8	1160 Nl/min	2600 Nl/min
1/2	1260 Nl/min	5300 Nl/min
3/4 (3 bar)	1530 Nl/min	3300 Nl/min

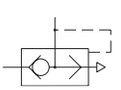
*Portata a 3 bar - Flow rate at 3 bar
Débit à 3 bar - Druckfluß (3 bar)







Type	D1	L1	L2	L3	CH	g
27 00 M5	M5x0,8	4.5	15.6	24.8	10	34
27 00 18	G1/8	8	28	42	15	84,8
27 00 14	G1/4	11	34.5	53	19	148,2
27 00 38	G3/8	12	36	55	21	149,2
27 00 12	G1/2	14	44	71	26	326
27 00 34	G3/4	18	52	86	32	451,6



Valvola in grado di scaricare rapidamente l'aria contenuta in un circuito in caso di mancanza d'alimentazione; se applicate ad un cilindro permettono di aumentarne la velocità.

This valve can easily vent the circuit in case of an air supply failure. If assembled on the cylinder port, it increases the cylinder speed.

Cette vanne permet de mettre à l'échappement un circuit en cas de défaut d'alimentation. Raccordée sur un vérin, elle permet d'augmenter la vitesse du débit d'échappement et de ce fait d'augmenter sa vitesse de fonctionnement.

Dieses Ventil kann bei Luftmangel die Anlage schnell entlüften. Wenn am Zylinderausgang montiert, wird dessen Geschwindigkeit vergrössert.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato alla valvola.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the valve.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
en fonction du raccord monté sur la vanne.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Die Schläuche werden durch die am Schnellentlüftungsventil montierte Verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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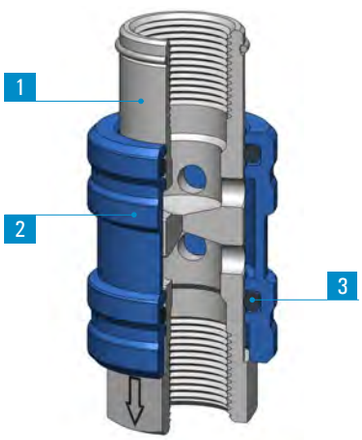
Valvola a corsoio | Slide valve | Vanne à douille coulissante | Handschieberventil

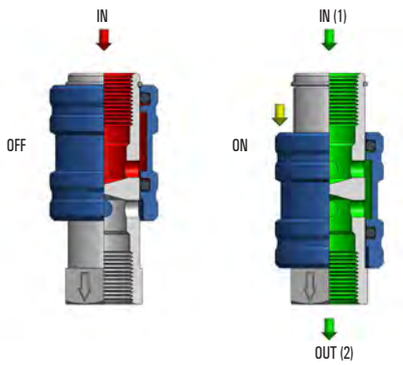
MV 26

1	2	3
Corpo Body Corps Körper	Manicotto Sleeve Douille Hülse	Guarnizioni Seals Joint d'étancheité Dichtung
Ottone UNI EN 12164 CW614N Cromato Brass UNI EN 12164 CW614N Chrome plated Laiton UNI EN 12164 CW614N chromé Ms Verchromt UNI EN 12164 CW614N	Alluminio Anodizzato Al6060 Anodised Aluminium Al6060 Aluminium Anodisé Al6060 Eloxiertes Aluminium Al6060	NBR NBR NBR NBR

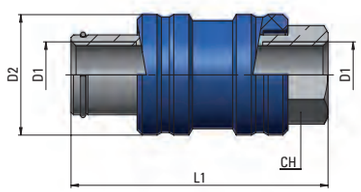
-20°C ÷ 80°C

0 ÷ 10 bar





Portata Flow rate Débit Druckfluß (6 bar - Δp = 1bar)	IN OUT 1→2
MV 26 00 M5	125 Nl/min
MV 26 00 18	620 Nl/min
MV 26 00 14	920 Nl/min
MV 26 00 38	1520 Nl/min
MV 26 00 12	2720 Nl/min



Type	D1	D2	L1	CH	g
26 00 M5	M5x0,8	13	30.3	9	10,3
26 00 18	G1/8	21	46	14	40
26 00 14	G1/4	24	51.2	17	57,7
26 00 38	G3/8	31	58.9	22	117,2
26 00 12	G1/2	34.7	72,5	26	175,5

Queste valvole hanno lo scopo di sezionare un impianto. Facendo scorrere la ghiera anodizzata si ottengono i due stati possibili (ON-OFF) del circuito. Quando la ghiera è in battuta sull'esagono dello stelo, l'aria fluisce nella direzione indicata dalla freccia stampigliata (ON); facendo retrocedere la ghiera si toglie alimentazione mandando in scarico il circuito (OFF).

The valve is used to section a pneumatic installation. Sliding the sleeve on the rod, both ON and OFF positions can be achieved. When the sleeve is against the rod hexagon, the flow goes in the arrow direction (ON); pushing it backwards the air supply is cut off and the installation is vented (OFF)

La fonction de ces vannes est de séctionner une installation. En faisant coulisser la douille anodisée, on selectionne la position ON ou la position OFF du circuit. Si la douille se trouve au niveau du six-pans, le débit passe dans le sens indiqué par la fèche (ON); en faisant coulisser la douille, on coupe l'alimentation et l'air échappe du circuit (OFF)

Der Zweck dieses Ventiles ist die Anlage vom Druckluftnetz zu trennen. Schiebt man die eloxierte Hülse, wird die Anlage ein-bzw-ausgeschaltet. Steht die Schiebehülse in Pfeilrichtung am Spindelsechskant, fliesst die Luft entsprechend der geprägten Pfeilrichtung (EIN). Beim Zurückschieben der Hülse wird der Lufteingang gesperrt, und die Anlage entlüftet entgegen der Pfeilrichtung (AUS)

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato alla valvola.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the valve.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
en fonction du raccord monté sur la vanne.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Die Schläuche werden durch die am Schnellentlüftungsventil montierte Verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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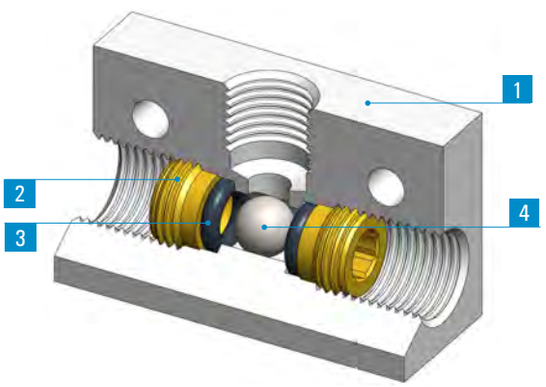
MV 32

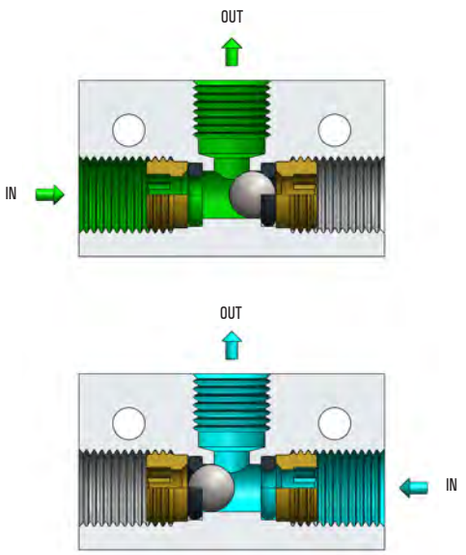
Valvola selettrice | Shuttle valve | Sélecteur de circuit | Oder-Ventil

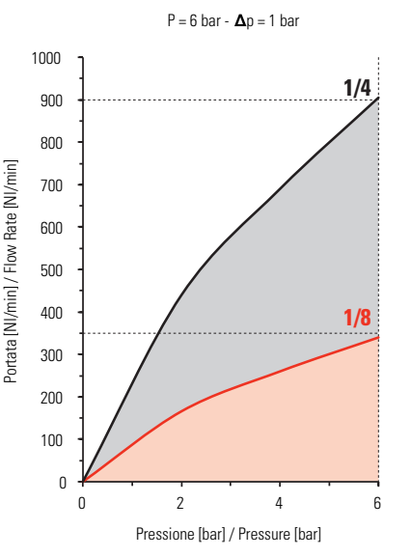
1	2	3	4
Corpo Body Corps Körper	Bussola Cartridge Cartouche Patrone	Guarnizioni Seals Joint d'étancheité Dichtung	Sfera Ball Bille Kugel
Alluminio Anodizzato Al2011 Anodised Aluminium Al2011 Aluminium Anodisé Al2011 Eloxiertes Aluminium Al2011	Ottone UNI EN 12164 CW614N Brass UNI EN 12164 CW614N Laiton UNI EN 12164 CW614N Messing UNI EN 12164 CW614N	NBR NBR NBR NBR	Acciaio Inox AISI 420 Stainless Steel AISI 420 Acier Inox AISI 420 Edelstahl AISI 420

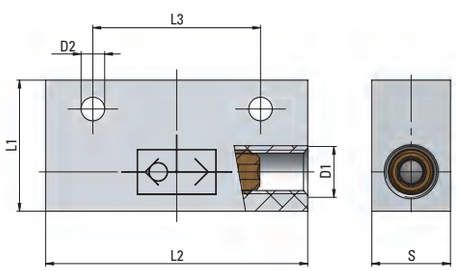
-20°C ÷ 80°C

2 ÷ 10 bar

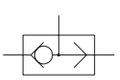








Type	D1	D2	L1	L2	L3	S	g
32 00 18	G1/8	4,5	25	50	32	15	57,4
32 00 14	G1/4	5,5	30	52	35	20	74



Vengono utilizzate in un impianto quando due valvole indipendenti l'una dall'altra devono comandare la stessa apparecchiatura. Il segnale, da qualsiasi delle due valvole pervenga, viene ricevuto dalla valvola selettrice ed inviato all'elemento da comandare.

It is used when two valves have to operate the same equipment. The signal, no matter from which of the two valves it comes, is received by the shuttle valve and trasmitted to the device to operate.

Il est utilisé dans les installations pneumatiques lorsque deux vannes doivent commander un seul équipment. Dans le cas où deux signaux sont transmis simultanément, seulement un signal sera pris en compte par le sélecteur et transmis à l'équipment à piloter.

Diese Ventile werden in einer pneumatischen Anlage eingesetzt, wenn zwei Ventile unabhängig voneinander das gleiche Gerät steuern müssen. Das Signal, egal von welchem der zwei Ventile es kommt, wird von dem Oderventil empfangen und zu dem Gerät gesendet, das anzusteuern ist.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato alla valvola.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the valve.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
en fonction du raccord monté sur la vanne.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Die Schläuche werden durch die am Schnellentlüftungsventil montierte Verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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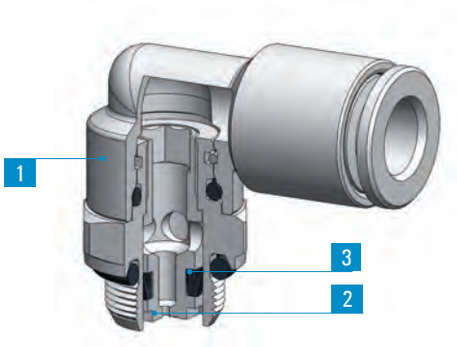
Strozzatore unidirezionale | Throttle fitting | Étrangleur | Drosselventil

MV 44

1	2	3
Raccordo Automatico Push-in fittings Raccords instantanés Steckverschraubungen	Bussola Cartridge Cartouche Patrone	Guarnizioni Seals Joint d'étancheité Dichtung
Raccordo Automatico serie MA MA line push-in fittings Raccords instantanés série MA MA Steckverschraubungen	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt	NBR NBR NBR NBR

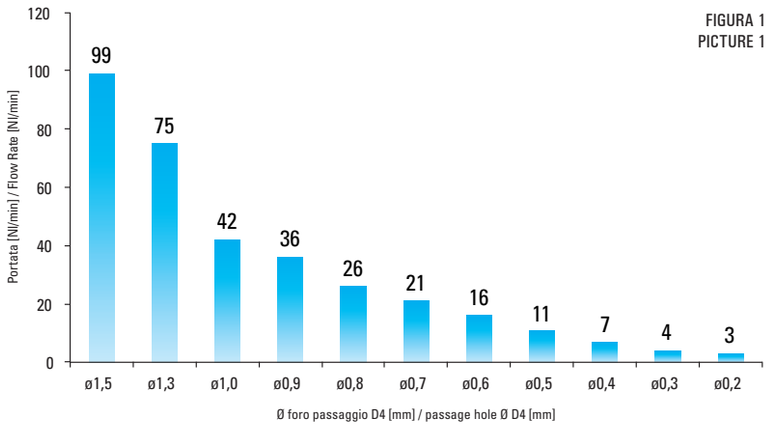
-20°C ÷ 80°C

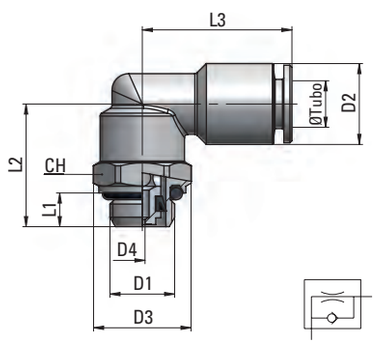
max 15 bar



P = 6 bar - Δp = 1 bar

FIGURA 1
PICTURE 1





Type	Ø Tubo	D1	D2	D3	D4	L1	L2	L3	CH	g ⚖
44 04 M5	4	M5x0,8	9,1	10	...	4	12,5	18,5	6	11,4
44 04 18	4	G1/8	9,1	14,5	...	5	18,2	19,5	13	18
44 06 M5	6	M5x0,8	12	10	...	4	12,5	21,5	6	13
44 06 18	6	G1/8	12	14,5	...	5	18,2	22	13	20
44 06 14	6	G1/4	12	16	...	6,5	22,7	22	13	24
44 08 18	8	G1/8	14	14,5	...	5	18	22,5	13	22
44 08 14	8	G1/4	14	16	...	6,5	22,5	22,5	13	26

Nota:
In fase d'ordine specificare dopo il codice dell'articolo d'interesse il diametro del foro calibrato (D4) che si desidera es. (MV 44 06 18 0,3)
In case of order, please state after the part number, the size of the calibrated orifice (D4) i.e (MV 44 06 18 0,3)
En cas de commande, veuillez s'il Vous plaît indiquer après la référence, le diamètre du trou calibré (D4) désiré. (Ex. MV 44 06 18 0,3)
Im Auftragsfall, nach der Referenznummer bitte immer den Durchmesser der kalibrierten Bohrung (D4) angeben. (Beispiel MV 44 06 18 0,3)

Questi raccordi hanno al loro interno una bussola con un foro calibrato il cui diametro determina uno strozzamento del flusso che potrà così assumere i valori riportati in Fig. 1. Tipico impiego degli strozzatori sono quelle applicazioni dove si conosce a priori il flusso o la velocità desiderata dei cilindri e dove non siano richieste regolazioni successive. I vantaggi derivanti dall'impiego degli strozzatori consistono nell'impossibilità di apportare regolazioni indesiderate al flusso e nella costanza nel tempo della regolazione, cosa fondamentale in presenza di vibrazioni.

This fitting houses a cartridge with a calibrated orifice. The orifice diameter causes a flow throttling thereby allowing the desired flow (see our Chart 1). The throttle fittings are mostly used when the user knows the exact cylinder speed and when no further settings of the cylinder are requested.
The major advantage is that no undesired tamperings can occur and in case of vibrations the flow setting will remain stable.

Ces raccords ont à l'intérieur une cartouche à trou calibré, dont le diamètre produit un étranglement du débit. Par cela on pourra atteindre les débits indiqués dans notre tableau 1. Ces étrangleurs sont bien utilisés surtout dans les applications où l'on connaît déjà a priori le débit desiré ou la vitesse des verins, qui après ne pourront être modifiés que en changeant la cartouche. Les avantages principaux de ces étrangleurs sont l'impossibilité de changer le réglage du débit et la constance dans le temps du réglage, ce qui est particulièrement important en présence de vibrations.

Diese Verschraubung enthält eine Patrone mit kalibrierter Bohrung, deren Durchmesser eine Durchflußdrosselung bewirkt. Dadurch werden die nachstehenden Durchflußwerte erreicht. Diese Drosselverschraubungen finden in jene Anlagen Anwendung, wo der Durchfluß oder die Zylindergeschwindigkeit im voraus bekannt ist und vorwiegend, wo weitere Einstellungen nicht mehr nötig sind. Der Vorteil dieser Verschraubung liegt darin, dass es nicht möglich ist unerwünscht den Durchfluss einzustellen und vor allem, dass die Einstellung konstant in der Zeit trotz moeglichen Vibrationen bleibt.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Poliuretano PU
(98 Shore A)

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A).

Domaines d'application:
circuits pneumatiques avec air filtré
et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyurethan PU
(98 Shore A).

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

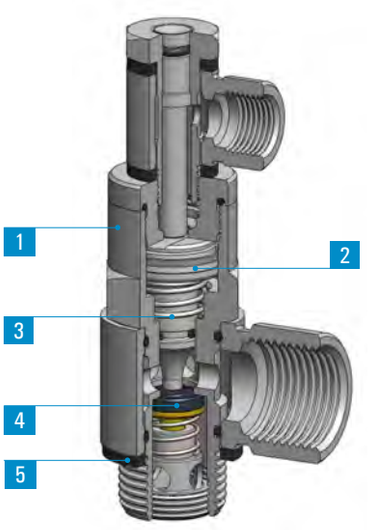
MV 45

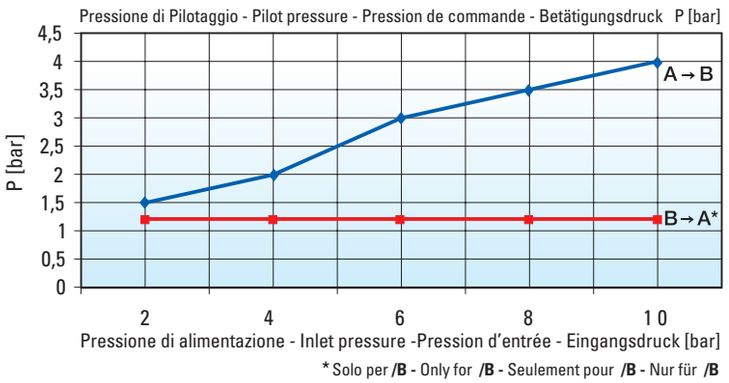
Valvola di blocco | Pilot operated check valve | Vanne d'arrêt | Sperrventil

1	2	3	4	5
Corpo Body Corps Körper	Pistone Piston Piston Kolben	Molla Spring Ressort Feder	Guarnizioni Seals Joint d'étancheité Dichtung	Rondelle Gasket Bague Plastique Kunststoffring
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt	Acciaio Inox AISI 304 Stainless Steel AISI 304 Acier Inox AISI 304 Edelstahl AISI 304	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	NBR-PU NBR-PU NBR-PU NBR-PU	PA6 PA6 PA6 PA6

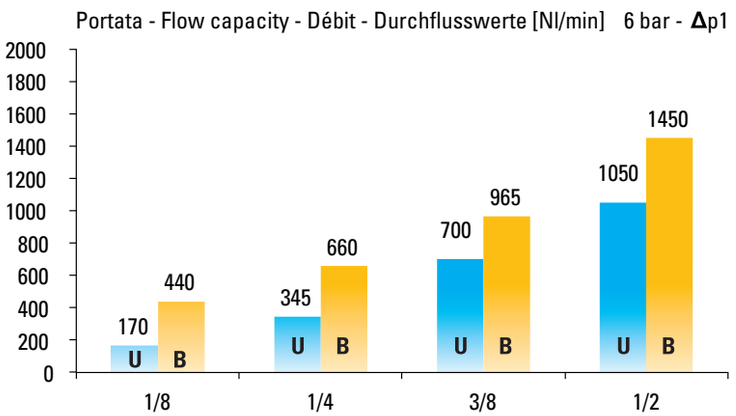
-20°C ÷ 80°C

max 10 bar





* Solo per **/B** - Only for **/B** - Seulement pour **/B** - Nur für **/B**



Le valvole di blocco pilotate, se montate in coppia su un cilindro, in caso di una diminuzione improvvisa della pressione di comando, assicurano che ogni movimento del cilindro venga impedito.
Mediante il dispositivo di sblocco, è possibile ripristinare manualmente la corsa del pistone, cosa particolarmente utile in fase di messa a punto oppure in mancanza d'aria.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
Variabili in funzione del tipo di raccordo collegato allla valvola.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

Should a sudden pressure failure happen, if the stop valves are assembled in pairs on the cylinder, the stop valves make sure, that the cylinder piston rapidily stops. By operating the override device, it is possible to reset manually the piston stroke, which is particularly important during a set-up phase or in case of air shortage.

DATA SHEET

Recommended tubings:
according to the fitting connected to the valve.

Application field:
pneumatic installations fed with filtered, lubricated air.

La vanne d'arrêt pilotée permet, si montée en couple sur un vérin, de bloquer instantanément le déplacement de la tige du vérin en cas de chute brutale de la pression. Une commande manuelle permet de réalimenter le vérin. Cette fonctionnalité est particulièrement intéressante pendent la mise au point d'une machine ou en cas de problème sur l'alimentation d'air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
En fonction du raccord monté sur la vanne.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

Wenn zwei Sperrventile am Zylinderanschluss montiert werden, bei plötzlichem Druckabfall halten sie den Zylinderkolben schlagartig an. Mittels der Handbetätigung kann man den Kolbenhub noch laufen lassen, was bei einer Einrichtungsphase oder aber bei Luftausfall besonders vorteilhaft ist.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Die Schläuche werden durch die am Schnellentlüftungsventil montierte Verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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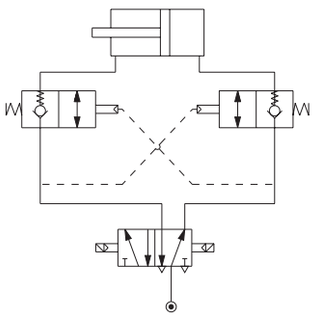
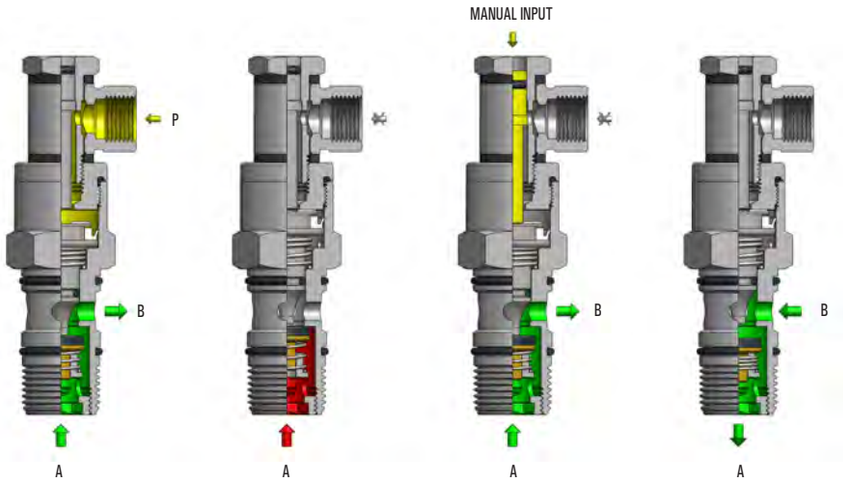
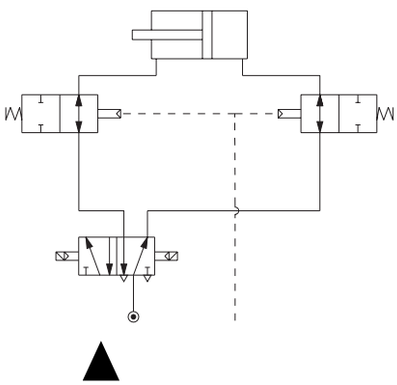
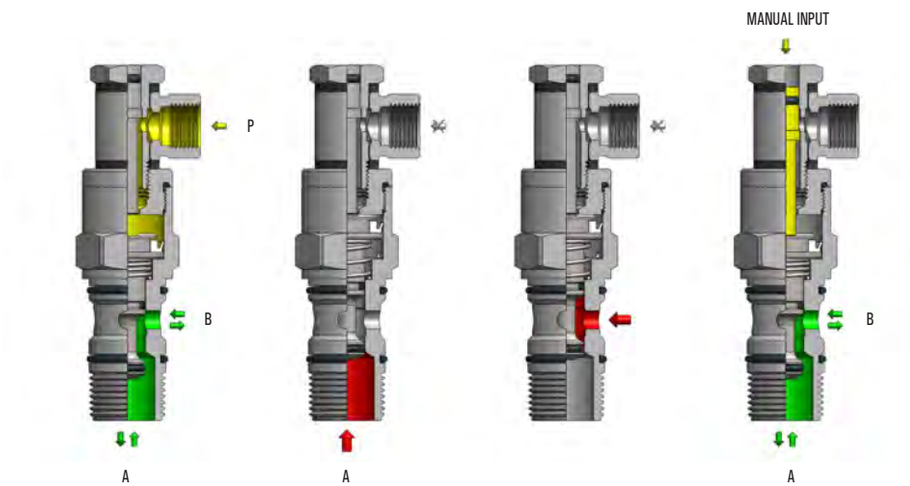
/U = Valvola Unidirezionale - One Way - Unidirectionel - Einseitig

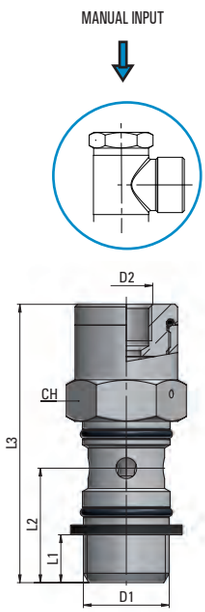




/B = Valvola Bidirezionale - Bidirectional - Bidirectionel - Beidseitig

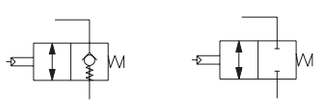






Type	D1	D2	L1	L2	L3	CH1	g ⚖
45 00 18	**G1/8**	M5x0,8	6.2	15,5	42.8	13	24
45 00 14	**G1/4**	M5x0,8	8.2	18.3	47.5	17	46
45 00 38	**G3/8**	G1/8	9.2	21	55	20	77,5
45 00 12	**G1/2**	G1/8	10.5	25	61.5	25	138,5

Disponibile nelle versioni:
Available as:



.../U .../B

Manual Input disponibile su richiesta
Manual Input available upon request

MV 46

Interruttore pneumatico | Pneumatic switch | Vanne à levier basculant | Kipphebelventil

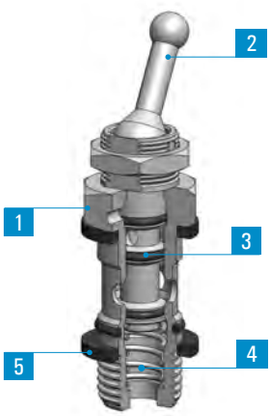
1	2	3	4	5
Corpo Body Corps Körper	Leva Handle Levier Hebel	Guarnizioni Seals Joint d'étancheité Dichtung	Molla Spring Ressort Feder	Rondelle Gasket Bague Plastique Kunststoffring
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt		NBR NBR NBR NBR	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	PA6 PA6 PA6 PA6

-20°C ÷ 80°C

max 15 bar

2/2

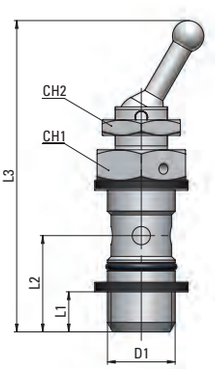
3/2



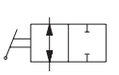
Portata
Flow rate
Débit
Druckfluß

(6 bar - Δp = 1bar)

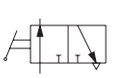
1/8	235 Nl/min
1/4	265 Nl/min



Type	D1	L1	L2	L3	CH1	CH2	g
46 00 18	G1/8	6.5	15.9	54.8	14	15	25
46 00 14	G1/4	8	18.7	59.8	17	15	41



2 VIE



3 VIE

Queste valvole hanno la funzione di sezionare un circuito (ON/OFF) semplicemente azionando la leva di comando; disponibili nelle versioni a 2 vie e a 3 vie, con l'impiego della valvola a 3 vie, oltre al sezionamento del circuito a valle dell'interruttore si ottiene anche lo scarico dello stesso in atmosfera.

The MV 46 is a pneumatic switch. It is available in a 2/2 and 3/2-way version. The goal of the 2/2 way switch is to cut off the flow in the circuit whenever needed by simply operating the lever. The 3/2 way valve cuts off the flow and vents to atmosphere the terminal part of the circuit.

Notre MV 46 est une vanne à levier basculant. Elle est disponible en deux versions: 2/2 et 3/2 voies. La vanne à 2 voies permet d'interrompre le débit dans un circuit pneumatique par un simple mouvement du levier de la vanne. Avec la version à 3 voies on n'achève pas seulement l'interruption du débit, mais on permet aussi l'échappement en atmosphère de la partie à val du circuit

Unser MV 46 ist in zwei Ausführungen verfügbar und zwar als 2/2 oder als 3/2 Wege-Kipphebelventil. Das 2 Wege-Kipphebelventil dient vorwiegend dazu, die Druckluft in einer Anlage mit einer einfachen Handbewegung des Hebels auszuschalten. Das 3/2 Wege-Kipphebelventil ermöglicht die Ausschaltungsfunktion der Druckluft und dazu auch die Entlüftung in die Atmosphäre vom Teil der Anlage, der sich nach dem Ventil befindet.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato alla valvola.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the valve.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
en fonction du raccord monté sur la vanne.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Die Schläuche werden durch die am Schnellentlüftungsventil montierte Verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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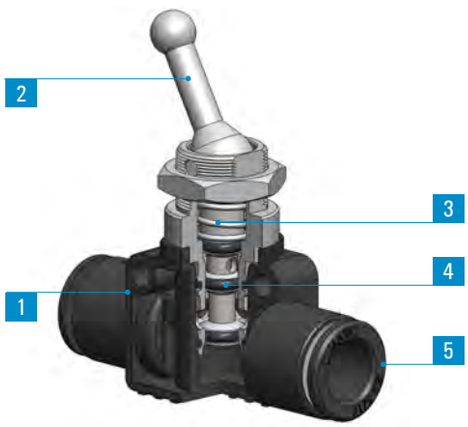
Interruttore pneumatico in linea | In-line pneumatic switch | Vanne à levier basculant en ligne | Kipphebelventil, in Linie

MV 48

1	2	3	4	5
Corpo Body Corps Körper	Interruttore Pneumatic switch Interrupteur pneumatique Kipphebelventil	Molla Spring Ressort Feder	Guarnizioni Seals Joint d'étancheité Dichtung	Raccordo Automatico Push-in fittings Raccords instantanés Steckverschraubungen
POM POM POM POM	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	NBR NBR NBR NBR	Raccordo Automatico serie MB MB line push-in fittings Raccords instantanés série MB MB Steckverschraubungen

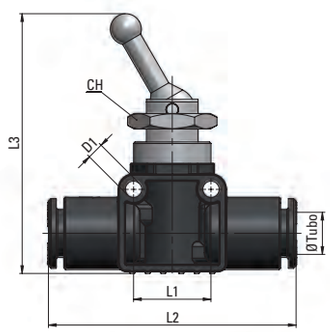
-20°C ÷ 70°C

max 15 bar

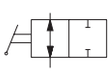


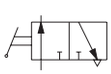
Portata
Flow rate
Débit
Druckfluß
(6 bar - Δp = 1bar)

Ø6	185 Nl/min
Ø8	190 Nl/min



Type	Ø Tubo	D1	L1	L2	L3	CH	g
48 06 06	6	3,2	16	47	48.8	15	30,5
48 08 08	8	3,2	16	48	50.3	15	32


2 VIE


3 VIE

Queste valvole hanno la funzione di sezionare un circuito (ON/OFF) semplicemente azionando la leva di comando; disponibili nelle versioni a 2 vie e a 3 vie, con l'impiego della valvola a 3 vie, oltre al sezionamento del circuito a valle dell'interruttore si ottiene anche lo scarico dello stesso in atmosfera

The MV 48 is a pneumatic switch. It is available in a 2/2 and 3/2-way version. The goal of the 2/2 way switch is to cut off the flow in the circuit whenever needed by simply operating the lever. The 3/2 way valve cuts off the flow and vents to atmosphere the terminal part of the circuit.

Notre MV 48 est une vanne à levier basculant. Elle est disponible en deux versions: 2/2 et 3/2 voies. La vanne à 2 voies permet d'interrompre le débit dans un circuit pneumatique par un simple mouvement du levier de la vanne. Avec la version à 3 voies on n'achève pas seulement l'interruption du débit, mais on permet aussi l'échappement en atmosphère de la partie à val du circuit.

Unser MV 48 ist in zwei Ausführungen verfügbar und zwar als 2/2 oder als 3/2 Wege-Kipphebelventil. Das 2 Wege-Kipphebelventil dient vorwiegend dazu, die Druckluft in einer Anlage mit einer einfachen Handbewegung des Hebels auszuschalten. Das 3/2 Wege-Kipphebelventil ermöglicht die Ausschaltungsfunktion der Druckluft und dazu auch die Entlüftung in die Atmosphäre vom Teil der Anlage, der sich nach dem Ventil befindet.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Poliuretano PU
(98 Shore A)

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A).

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A).

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyurethan PU
(98 Shore A).

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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MV 47

Economizzatore regolatore di pressione | Pressure control | Réducteur de pression | Druckregler

1	2	3
Corpo Body Corps Körper	Molla Spring Ressort Feder	Guarnizioni Seals Joint d'étancheité Dichtung
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	NBR NBR NBR NBR

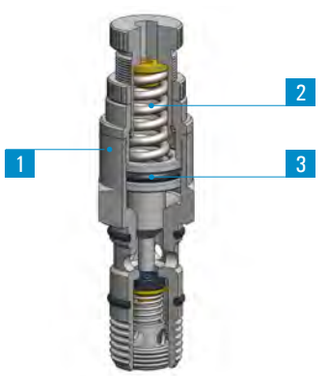
-20°C ÷ 80°C

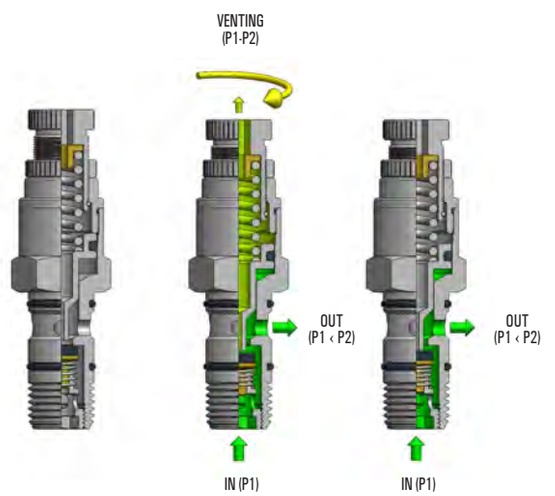
IN

0 ÷ 10 bar

OUT

0 ÷ 8 bar

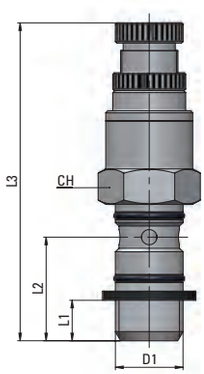




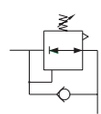
Portata
Flow rate
Débit
Druckfluß

(6 bar - Δp = 1bar)

1/8	205 Nl/min
1/4	290 Nl/min



Type	D1	L1	L2	L3	CH	g ⚖
47 00 18	G1/8	6.2	15.5	56.8	15	33,6
47 00 14	G1/4	8.2	18.5	62.9	17	54



Installati in un circuito pneumatico permettono di regolare la pressione di lavoro delle attrezzature collegate, mantenendo tale regolazione costante nel tempo. Particolarmente interessante è l'applicazione come Economizzatore, che si ottiene collegando il regolatore tra la valvola ed il cilindro da comandare. In questo modo è possibile ottenere una riduzione di pressione e di velocità dello stelo in un unico senso (quello desiderato), contenendo così il consumo d'aria da parte del cilindro.

When installed in a pneumatic circuit, the pressure control sets the working pressure of all the connected components. The pressure adjustment will be thereby kept steady for a long time. It can also be used as an economizer when connected between the valve and the cylinder to operate. Pressure is being saved and rod speed decreased in the desired direction. A big energy saving is this way obtained.

Le réducteur de pression permet de régler la pression de travail des équipments et de la maintenir constante. Le réducteur peut aussi jouer le rôle d'"économisateur", lorsqu'il est utilisé entre la vanne et le vérin. Grâce à cette solution, on réduit la pression et la vitesse du vérin dans le sens desiré et on optimise l'énergie employée.

Der Druckregler wird überwiegend in pneumatischen Anlagen eingesetzt und regelt den Betriebsdruck einzelner Geräte. Er gewährleistet den eingestellten Druck auf Dauer. Empfehlenswert ist die Verwendung als Energiesparventil. In diesem Fall wird der Druckregler zwischen dem Ventil und dem zu betätigenden Zylinder eingesetzt. Dadurch wird der Druck herabgesetzt und der Zylinderkolben in der beliebten Richtung verlangsamt. Eine grosse Energieersparnis wird duch den Einsatz dieses Gerätes erreicht.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato al regolatore.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the pressure control.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
en fonction du raccord monté sur la vanne.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Die Schläuche werden durch die am Drosselrückschlagventil.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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Avviatore progressivo | Slow starter | Mise en pression progressive | Progressives Anfahrventil

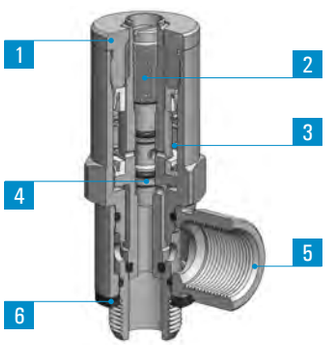
MV 50

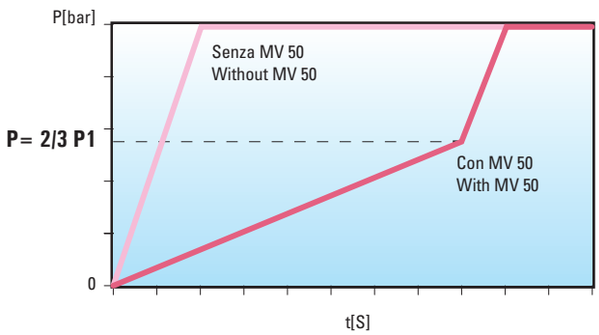
1	2	3	4	5	6
Corpo Body Corps Körper	Spillo Needle Epingle Nadel	Molla Spring Ressort Feder	Guarnizioni Seals Joint d'étancheité Dichtung	Anello Banjo Ring Banjo Ringstück	Rondelle Gasket Bague Plastique Kunststoffring
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Ms Vernickelt UNI EN 12164 CW614N		Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	NBR-PU NBR-PU NBR-PU NBR-PU	Ottone UNI EN 12165 CW617N Nichelato Brass UNI EN 12165 CW617N Nickel plated Laiton UNI EN 12165 CW617N Nickelé Ms Vernickelt UNI EN 12165 CW617N	PA6 PA6 PA6 PA6

P1

-20°C ÷ 80°C

3 ÷ 10 bar

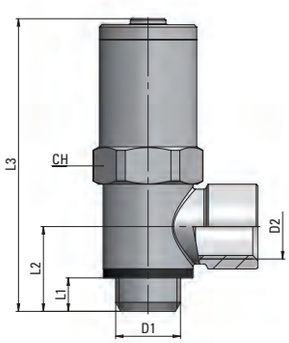




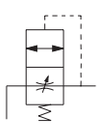
Portata
Flow rate
Débit
Druckfluß

(6 bar - Δp = 1bar)

MV50 1/4	1040 Nl/min
MV50 3/8	1900 Nl/min
MV50 1/2	2570 Nl/min



Type	D1	D2	L1	L2	L3	CH	g
50 00 14	G1/4	G1/4	6.7	17	63.9	20	99
50 00 38	G3/8	G3/8	9.2	21	69.4	20	130
50 00 12	G1/2	G1/2	10.5	24,5	72.4	25	180



Questo raccordo a funzione consente di mandare in pressione gradualmente l'impianto evitando agli attuatori eventualmente presenti nella linea i cosiddetti "colpi d'ariete" provocati da una pressurizzazione immediata dell'impianto precedentemente scaricato. L'avviatore progressivo aprendosi lentamente nel modo preimpostato dall'utente tramite apposita vite di regolazione immette progressivamente la pressione nel circuito consentendo agli attuatori di raggiungere la posizione di lavoro gradualmente senza subire bruschi colpi. La velocità di riempimento del circuito è determinata dalla rotazione dello spillo di regolazione: ruotandolo in senso orario si avrà un riempimento sempre più lento.

This fitting allows for a progressive pressurization of the installation and prevents the actuators from being hit hard in case of sudden pressure feeding of the previously vented circuit. Depending on the desired spindle setting, the Slow Start Fitting will open gradually, pressure will progressively flow into the circuit and the actuators will go back to their working position without being hit. Pressure feeding speed is indeed determined by the rotation of the spindle. If turned clockwise, a very smooth pressurization will be achieved.

Ce raccord permet de pressuriser l'installation progressivement sans que les actuateurs subissent de coups brusques entraînés par une pressurisation immédiate du circuit précédemment évacué. En fonction du réglage de la vis choisi par l'utilisateur, la vanne s'ouvre lentement et, par conséquent, la pressurisation à l'intérieur du circuit se fait graduellement. La vitesse de remplissage du circuit est déterminée par la rotation de la vis de réglage. Plus on la fait tourner dans le sens des aiguilles d'une montre et plus le remplissage est lent.

Dieses Ventil ermöglicht einen progressiven Druckaufbau in der Anlage und vermeidet, dass die Aktuatoren bei sofortiger Druckzuführung in die vorab entlüftete Anlage harten und plötzlichen Schlägen ausgesetzt werden. Das progressive Anfahrventil macht sich je nach Spindeleinstellung langsam auf, lässt Luftdruck durch und gewährleistet, dass die Anlagenaktuatoren ohne plötzliche Schläge die Arbeitsstelle erreichen. Die Geschwindigkeit des Druckaufbaus wird von der Einstellungsspindel bestimmt. Dreht man sie im Uhrzeigersinn, erfolgt die Füllung immer langsamer.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato alla valvola.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the valve.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
en fonction du raccord monté sur la vanne.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Die Schläuche werden durch die am Schnellentlüftungsventil montierte Verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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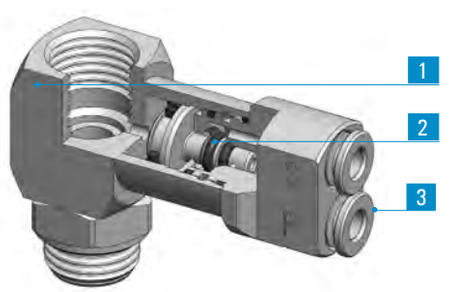
MV 52

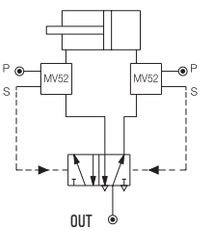
Finecorsa pneumatico | Threshold sensor | Fin de course pneumatique | Endlagenmelder

1	2	3
Corpo Body Corps Körper	Guarnizioni Seals Joint d'étancheité Dichtung	Raccordo Automatico Push-in fittings Raccords instantanés Steckverschraubungen
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Ms Vernickelt UNI EN 12164 CW614N	NBR-PU NBR-PU NBR-PU NBR-PU	Raccordo Automatico serie MA MA line push-in fittings Raccords instantanés série MA MA Steckverschraubungen

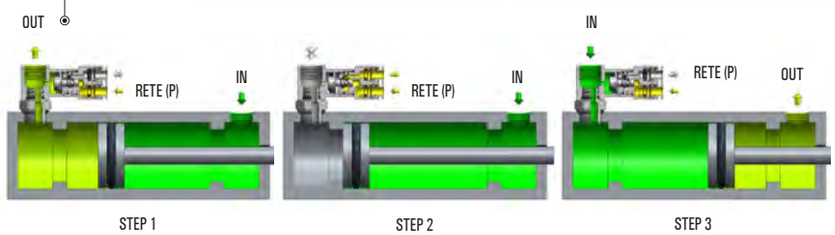
-20°C ÷ 80°C

0 ÷ 10 bar

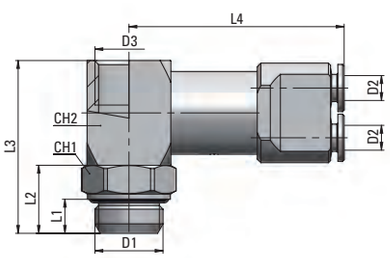




Pressione di esercizio (bar) / Working pressure (bar) / Pression de service (bar) / Druckbereich (bar)	Pressione di commutazione (bar) / Switching pressure (bar) / Pression de commutation (bar) / Umstellungsdruck (bar)
3	0,3
4	0,5
5	0,65
6	0,9
7	1
8	1,2
9	1,4
10	1,6



STEP 1 | STEP 2 | STEP 3



Type	D1	D2	D3	L1	L2	L3	L4	CH1	CH2	g
52 00 18	G1/8	4	G1/8	5	11	27	39	14	16	69
52 00 14	G1/4	4	G1/4	6,5	13	33	41	16	16	78,3
52 00 38	G3/8	4	G3/8	7	14.5	34.5	43.3	20	20	98

Questo raccordo a funzione è in grado di rilevare una caduta di pressione emettendo, al suo verificarsi un segnale di comando (S). Particolarmente interessante è l'applicazione di questo raccordo come "Sensore di finecorsa" ottenuta montando direttamente sul cilindro il raccordo sensore: al raggiungimento della corsa completa del cilindro (annullamento della contropressione di scarico nella camera del cilindro) si ha l'emissione di un segnale di pilotaggio per la valvola direzionale che commutandosi invierà al cilindro il comando per l'inversione della corsa. Il principale vantaggio ottenuto impiegando questi raccordi funzione è la possibilità di poter comandare la corsa del cilindro senza necessità di cablaggi elettrici; l'unica condizione imposta per il corretto funzionamento del sensore pneumatico è che il cilindro deve fare la corsa completa, non sono ammesse posizioni intermedie.

Threshold sensor can detect a pressure drop and signal it with a command signal (s). This component turns out to be especially useful when assembled directly on the cylinder. When the piston completes its stroke (no more counter pressure available in the cylinder), a command signal is given out to a direction valve to have the piston change the stroke. Sole condition required for perfect component performance is that the piston has to complete its stroke. No intermediate positions are allowed. Major advantage of this component is to command the piston stroke changes without electrical connections

Le but de ce raccord à fonction est de signaler une chute de pression par l'intermédiaire d'un signal de commande (S). L'emploi le plus intéressant de ce produit, est le montage directement sur le vérin: à l'achèvement de la course du piston (plus contre-pression dans la chambre du vérin), il envoi un signal à la vanne direction, pour qu'elle commande le changement de la course du piston. La condition principale pour un fonctionnement parfait du fin de course est que le piston doit avoir terminé sa course. Les positions intermédiaires ne sont pas permises. L'avantage principal de ce composant consiste à commander la course du piston sans électricité.

Bei Druckausfall weist diese Funktionsverschraubung durch einen Steuersignal darauf hin (S). Besonderes Interesse erweckt der Einsatz der Endlagenmelder direkt am Zylinder, so dass bei komplettem Kolbenhub (nach Abfallen des Gegendruck in der entlüftenden Zylinderkammer) ein Steuersignal an Steuerventil ausgegeben wird, welches zum Beispiel die Richtungsänderung des Zylinders auslöst. Das Steuersignal kann aber für viele andere Steuerungsaufgaben eingesetzt werden. Das Ventil findet überall dort seinen Einsatz wo ein pneumatisches Ausgangssignal nach Druckabbau der entlüftenden Zylinderkolbenkammer gefordert wird. Der Hauptvorteil des Einsatzes der Signalverschraubung ist die Signalverarbeitung ohne elektrische Verbindung.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato alla valvola.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the valve.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
en fonction du raccord monté sur la vanne.

Domaine d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Die Schläuche werden durch die am Schnellentlüftungsventil montierte Verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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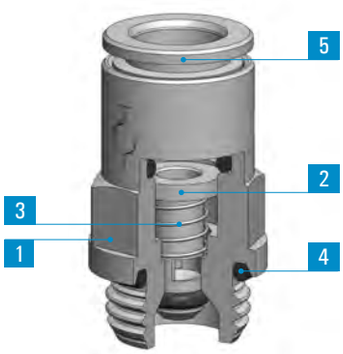
Raccordo d'arresto | Stop fitting | Raccord à vanne d'arret | Sperrventilverschraubung

MV 55

1	2	3	4	5
Corpo Body Corps Körper	Otturatore Valve Clapet Ventil	Molla Spring Ressort Feder	Guarnizioni Seals Joint d'étancheité Dichtung	Raccordo Automatico Push-in fittings Raccords instantanés Steckverschraubungen
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Ms Vernickelt UNI EN 12164 CW614N		Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	NBR NBR NBR NBR	Raccordo Automatico serie MA MA line push-in fittings Raccords instantanés série MA MA Steckverschraubungen

-20°C ÷ 80°C

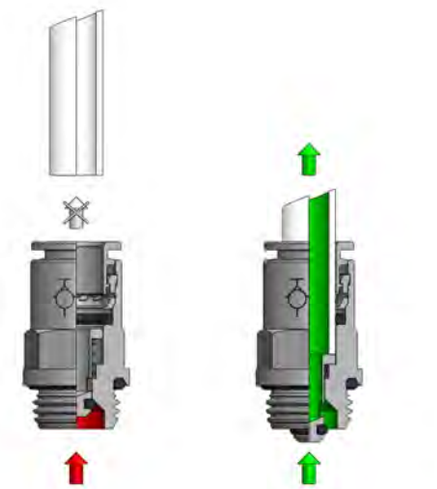
max 10 bar

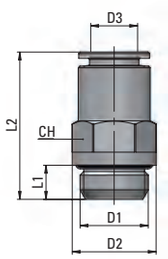


Portata
Flow rate
Débit
Druckfluß

(6 bar - Δp = 1bar)

1/8	365 Nl/min
1/4	380 Nl/min





Type	D1	D2	D3	L1	L2	CH	g
55 06 18	**G1/8**	13,5	6	5	27.7	12	14,9
55 06 14	**G1/4**	16	6	6,5	27.7	12	18
55 08 18	**G1/8**	14,5	8	5	27.9	13	17
55 08 14	**G1/4**	16	8	6,5	27.9	13	20,4

Questo raccordo è dotato di un otturatore che si sblocca solo a seguito dell'inserimento del tubo nel raccordo permettendo così il passaggio dell'aria solo con il tubo inserito. Se per qualche motivo il tubo dovesse sganciarsi il flusso d'aria proveniente dal raccordo verrebbe arrestato dalla chiusura dell'otturatore.

This fitting is provided with a check valve that opens when inserting the tubing into the fitting. Only then the air flow is allowed. Should the tube accidentally get released, the valve would immediately close again and the air flow would stop.

Ce raccord est pourvu à l intérieure d'une vanne d'arrét qui s'ouvre et permet le passage d'air seulement au moment de l'insertion du tube. Dans le cas d'un décrochage du tube accidentel, la vanne se ferme et le passage d'air en est bloqué.

Diese Verschraubung ist mit einem internen Sperrventil versehen, das sich nur bei Einstecken des Schlauches aufmacht. Erst dadurch wird der Durchfluss ermöglicht. Sollte versehentlich der Schlauch gelöst werden, wird sich das Sperrventil zumachen und automatisch den Durchfluss sperren.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Poliuretano PU
(98 Shore A).

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)

Domaine d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyurethan PU
(98 Shore A).

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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Silenziatori | Air mufflers | Silencieux | Schalldämpfer

	Corpo Body Corps Körper	Silenziatore Muffler Silencieux Schalldämpfer	Guarnizioni Seals Joint d'étancheité Dichtung	bar	
MV11-FE	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Ms Vernickelt UNI EN 12164 CW614N	Acciaio Inox AISI 304 Stainless Steel AISI 304 Acier Inox AISI 304 Edelstahl AISI 304		0 ÷ 12 bar	-10 ÷ 70 °C
MV11-FEP	PA6	Acciaio Inox AISI 304 Stainless Steel AISI 304 Acier Inox AISI 304 Edelstahl AISI 304		0 ÷ 12 bar	-10 ÷ 70 °C
MV11-PL	POM			0 ÷ 6 bar	-10 ÷ 70 °C
MV11-CO - MV11-CQ **MV11-BE - MV11-VE** **MV11-P**	Ottone UNI EN 12164 CW614N Brass UNI EN 12164 CW614N Laiton UNI EN 12164 CW614N Ms UNI EN 12164 CW614N	Bronzo Sinterizzato 89/11 Sintered bronze 89/11 Bronze fritté 89/11 Sinterbronze 89/11		0 ÷ 12 bar	-10 ÷ 70 °C
MV14	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Ms Vernickelt UNI EN 12164 CW614N	Bronzo Sinterizzato 89/11 Sintered bronze 89/11 Bronze fritté 89/11 Sinterbronze 89/11	NBR NBR NBR NBR	0 ÷ 10 bar	-10 ÷ 70 °C

Livello di rumore a 6 bar - Noise level at 6 bar
Niveau de bruit à 6 bar - Geräuschstand bei 6 bar

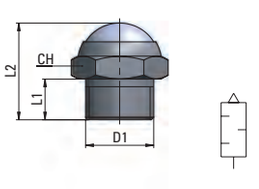
Tipo	1/8	1/4	3/8	1/2
MV11 -FE	74 dB	72 dB	88 dB	90 dB
MV11 -FEP	74 dB	72 dB	88 dB	90 dB
MV11 -CO	70 dB	67 dB	77 dB	80 dB
MV11 -CQ	70 dB	67 dB	77 dB	80 dB
MV11 -BE	75 dB	81 dB	82 dB	85 dB
MV11 -P	72 dB	73 dB	84 dB	88 dB
MV11 -PL	87 dB	84 dB	90 dB	90 dB
MV11 -VE	72 dB	73 dB	84 dB	88 dB

Soglia di filtrazione - Filtration threshold
Seuil de Filtration - Filterungsschwelle

Tipo	
MV11 -FE	100-200 µm
MV11 -FEP	100-200 µm
MV11 -CO	35 µm
MV11 -CQ	35 µm
MV11 -BE	35 µm
MV11 -P	80 µm
MV11 -PL	-
MV11 -VE	80 µm

MV 11-FE

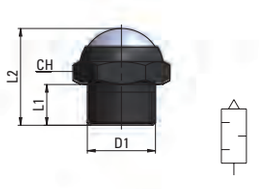
Silenziatore in Ottone con Filo in Acciaio Inox | Air muffler with stainless steel wire | Silencieux avec fil acier inox | Schalldämpfer mit Edelstahldraht



Type	D1	L1	L2	CH	g
11 00 18-FE	**G1/8**	6	15	13	6,2
11 00 14-FE	**G1/4**	8	19	16	10,9
11 00 38-FE	**G3/8**	7.5	19	19	16
11 00 12-FE	**G1/2**	10	22	24	28,5

MV 11-FEP

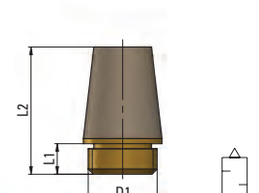
Silenziatore con Filo in Acciaio Inox | Air muffler with stainless steel wire | Silencieux avec fil acier inox | Schalldämpfer mit Edelstahldraht



Type	D1	L1	L2	CH	g
11 00 18-FEP	**G1/8**	6	16	13	2
11 00 14-FEP	**G1/4**	8	19	16	3,5
11 00 38-FEP	**G3/8**	7.5	19	19	4,9
11 00 12-FEP	**G1/2**	10	23	24	8,4

MV 11-CO

Silenziatore in Bronzo Sinterizzato | Sintered bronze air muffler | Silencieux en bronze fritté | Schalldämpfer aus Sinterbronze



Type	D1	L1	L2	g
11 00 M5-CO	**M5x0,8**	4,5	14.5	1,4
11 00 18-CO	**G1/8**	6	22	6,2
11 00 14-CO	**G1/4**	6	26	11,4
11 00 38-CO	**G3/8**	8	38.5	27,3
11 00 12-CO	**G1/2**	9	41	42

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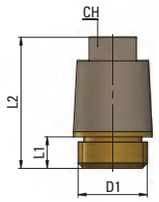
MV 11-CQ

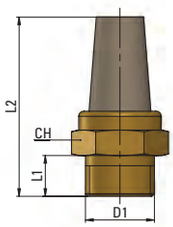
Silenziatore in bronzo sinterizzato | Sintered bronze air muffler | Silencieux en bronze fritté | Schalldämpfer aus Sinterbronze



Type	D1	L1	L2	CH	g
11 00 18-CQ	G1/8	6	22	7	6
11 00 14-CQ	G1/4	6	26	9	11,9
11 00 38-CQ	G3/8	8	38	10	25,8
11 00 12-CQ	G1/2	9	41	14	46,1

MV 11-BE

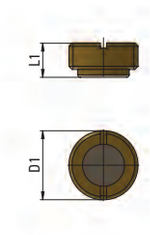
Silenziatore in bronzo sinterizzato | Sintered bronze air muffler | Silencieux en bronze fritté | Schalldämpfer aus Sinterbronze



Type	D1	L1	L2	CH	g
11 00 M5-BE	M5x0,8	4	16	8	2
11 00 18-BE	G1/8	6	28	13	8,8
11 00 14-BE	G1/4	8	32	16	15,2
11 00 38-BE	G3/8	7,5	41	19	25,7
11 00 12-BE	G1/2	10	46,5	24	47

MV 11-P

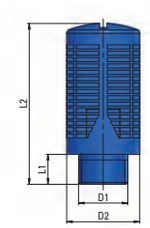
Silenziatore a pastiglia | Flat muffler | Silencieux, plat | Schalldämpfer aus Sinterbronze, flache Ausführung



Type	D1	L1	g
11 00 18-P	G1/8	4.5	1,3
11 00 14-P	G1/4	6.5	3,5
11 00 38-P	G3/8	7.5	6,9
11 00 12-P	G1/2	8.5	11,2

MV 11-PL

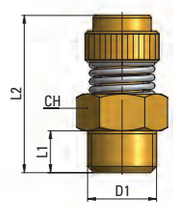
Silenziatore a sfere di plastica | Plastic ball muffler | Silencieux à boules plastique | Schalldämpfer mit Kunststoffkugeln

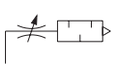


Type	D1	L1	L2	CH	g
11 00 18-PL	G1/8	15	6	32,5	3,4
11 00 14-PL	G1/4	19,5	8	43	6,5
11 00 38-PL	G3/8	24,5	11	58	13,5
11 00 12-PL	G1/2	24,5	11	58	15,1

MV 11-VE

Regolatore di scarico con silenziatore in bronzo sinterizzato | Exhaust control with sintered bronze air muffler | Réducteur d'échappement avec silencieux en bronze fritté | Entlüftungsdrosselventil mit Schalldämpfer aus Sinterbronze

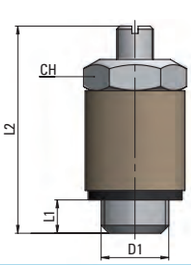


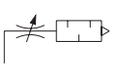


Type	D1	L1	L2 max	CH	g
11 00 18-VE	G1/8	6	29	13	16,5
11 00 14-VE	G1/4	8	33	15	25,6
11 00 38-VE	G3/8	11	36	22	50,3
11 00 12-VE	G1/2	11	37	22	58,7

MV 14

Regolatore di scarico con silenziatore | Exhausting Control with muffler | Réducteur d'échappement avec silencieux | Entlüftungsdrosselventil mit Schalldämpfer





Type	D1	L1	L2 max	CH	g
14 00 M5	M5x0,8	3	25	8	6
14 00 18	G1/8	4.9	31.7	14	27,1
14 00 14	G1/4	6.4	39.5	17	50,6
14 00 38	G3/8	6.7	50	20	92,9

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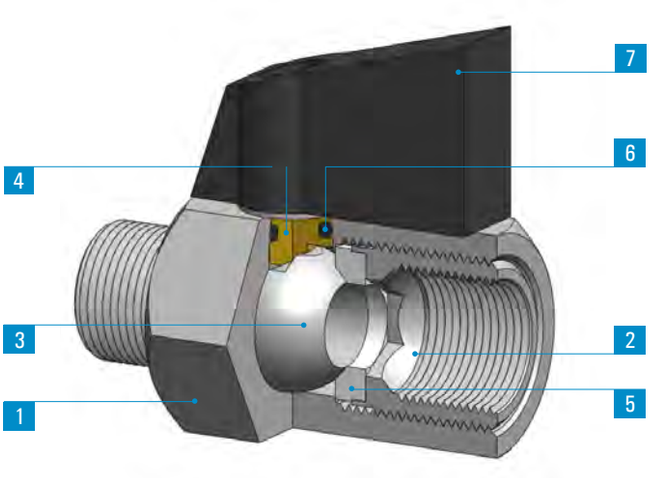
	1	2	3	4	5	6	7
MV24 - MV25	Corpo Body Corps Körper	Bussola Cartridge Cartouche Patrone	Sfera Ball Bille Kugel	Asta Stem Tige Spindel	Oring sede sfera Ball seat oring Joints d'étanchéité du logement billes Dichtungen des Kugelgehäuses	Guarnizioni Seals Joint d'étancheité Dichtung	Leva Handle Manette Griff
	Ottone UNI EN 12165 CW617N Cromato Brass UNI EN 12165 CW617N Chrome plated Laiton UNI EN 12165 CW617N chromé Ms Verchromt UNI EN 12165 CW617N	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Ms Vernickelt UNI EN 12164 CW614N			P.T.F.E P.T.F.E P.T.F.E P.T.F.E	NBR NBR NBR NBR	ABS ABS ABS ABS

	1	3	4	5	6	7
MV53 - MV54	Corpo Body Corps Körper	Sfera Ball Bille Kugel	Asta Stem Tige Spindel	Oring sede sfera Ball seat oring Joints d'étanchéité du logement billes Dichtungen des Kugelgehäuses	Guarnizioni Seals Joint d'étancheité Dichtung	Leva Handle Manette Griff
	Ottone UNI EN 12164 CW614N UNI EN 12165 CW617N Cromato Brass UNI EN 12164 CW614N UNI EN 12165 CW617N Chrome plated Laiton UNI EN 12164 CW614N UNI EN 12165 CW617N chromé Ms Verchromt UNI EN 12164 CW614N UNI EN 12165 CW617N	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Ms Vernickelt UNI EN 12164 CW614N		P.T.F.E P.T.F.E P.T.F.E P.T.F.E	NBR NBR NBR NBR	PA66 PA66 PA66 PA66

-20°C ÷ 80°C

0 ÷ 10 bar



Campi di applicazione:
Impianti pneumatici, idraulici ed oleodinamici.

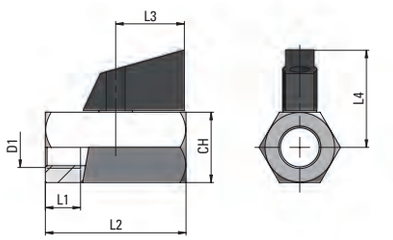
Application fields:
Pneumatic, hydraulic and oleodynamic circuits.

Domaines d'application:
Circuits pneumatiques, hydrauliques et oléodynamiques.

Anwendungsbereiche:
Hydraulische, öldynamische und pneumatische Anlagen.

MV 24

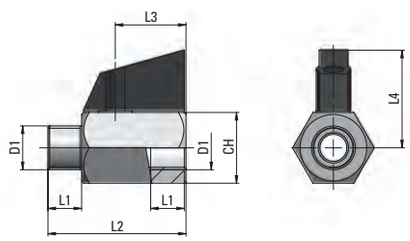
Rubinetto a sfera F-F | Ball valve, female | Vanne à sphère, femelle | Kugelhahn mit Innengewinde



Type	D1	L1	L2	L3	L4	CH	g
24 00 18	**G1/8**	8	39	20,5	29	20	90
24 00 14	**G1/4**	10	39	20,5	29	20	95,6
24 00 38	**G3/8**	10	42	20,5	29	20	83,3
24 00 12	**G1/2**	10,5	47	20,5	31	24	128

MV 25

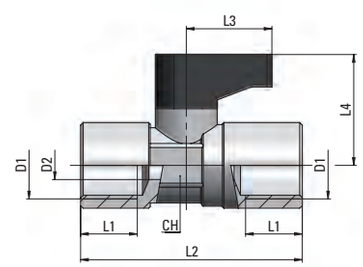
Rubinetto a sfera M-F | Ball valve, male | Vanne à sphère, mâle | Einschraub - Kugelhahn



Type	D1	L1	L2	L3	L4	CH	g
25 00 18	**G1/8**	8	39	20,5	29	20	84
25 00 14	**G1/4**	10	39	20,5	29	20	79,7
25 00 38	**G3/8**	10	42	20,5	29	20	77,5
25 00 12	**G1/2**	10,5	47	20,5	31	24	115,5

MV 53

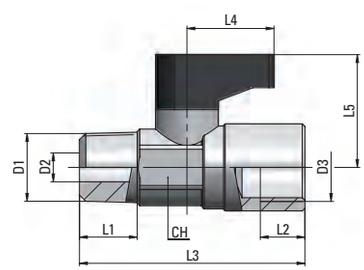
Rubinetto a sfera F-F | Ball valve, female | Vanne à sphère, femelle | Kugelhahn mit Innengewinde



Type	D1	D2	L1	L2	L3	L4	CH	g
53 00 18	**G1/8**	5,5	8	36,5	19	21,5	14	37,3
53 00 14	**G1/4**	5,5	11	43	19	21,5	14	49,5
53 00 38	**G3/8**	8	10,5	43	24	24	17	74,5
53 00 12	**G1/2**	10	12	49	34	27	21	138,9

MV 54

Rubinetto a sfera M conico-F | Ball valve, taper male-female | Vanne à boules mâle conique-femelle | Kugelhahn kegelig Einschraub-Aufschraub



Type	D1	D2	D3	L1	L2	L3	L4	L5	CH	g
54 00 18	**R1/8**	5,5	G1/8	8	8	35,5	19	21,5	14	34,3
54 00 14	**R1/4**	5,5	G1/4	11	11	40,5	19	21,5	14	43,2
54 00 38	**R3/8**	8	G3/8	11,5	10,5	43	24	24	17	67,3
54 00 12	**R1/2**	10	G1/2	15	12	50	34	27	21	89,5

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MV 51

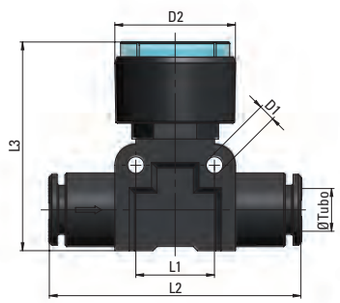
Manometro in linea | Pressure gauge fitting | Raccord à manomètre | Manometerverschraubung

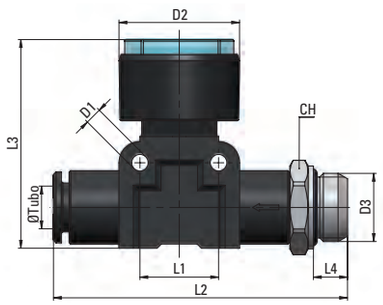
1	2	3	4
Corpo Body Corps Körper	Filetto Thread Filetage Gewinde	Manometro Gauge Manométre Manometer	Raccordo Automatico Push-in fittings Raccords instantanés Steckverschraubungen
POM POM POM POM	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Ms Vernickelt UNI EN 12164 CW614N	ABS ABS ABS ABS	Raccordo Automatico serie MB MB line push-in fittings Raccords instantanés série MB MB Steckverschraubungen

0°C ÷ 70°C

0 ÷ 10 bar

Versione con attacchi rapidi
Push-in version
Version instantanée
Steckausführung





Versione con attacco rapido e filetto
Push-in/threaded version
Version filetée et instantanée
Steck- Einschraubausfuehrung

Type	Ø Tubo	D1	D2	D3	L1	L2	L3	L4	CH	g
51 06 06	**6**	3,2	23	-	15	47	38	-	-	14
51 06 18	**6**	3,2	23	G1/8	15	53.1	38	5	13	21
51 06 14	**6**	3,2	23	G1/4	15	55.1	38	6,5	16	23
51 08 08	**8**	3,2	23	-	15	48	39.8	-	-	16
51 08 18	**8**	3,2	23	G1/8	15	54.2	39.8	5	14	23
51 08 14	**8**	3,2	23	G1/4	15	56.2	39.8	6,5	16	25

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Poliuretano PU
(98 Shore A)
Precisione:
4
Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A)
Accuracy:
4
Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
PA11, PA12, PA6, Polyurethane PU
(98 Shore A).
Précision:
4
Domaine d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyurethan PU
(98 Shore A).
Genauigkeit:
4
Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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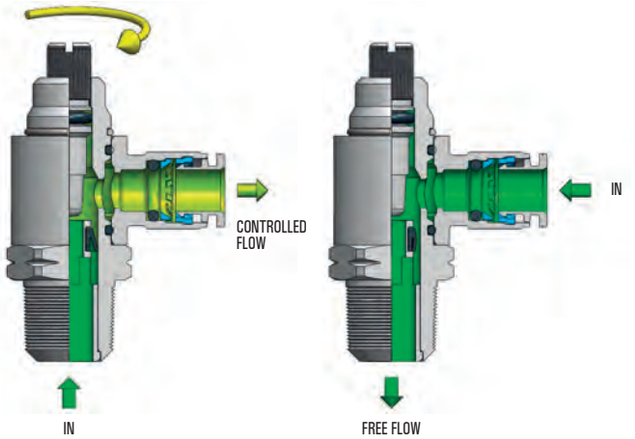
PV LINE

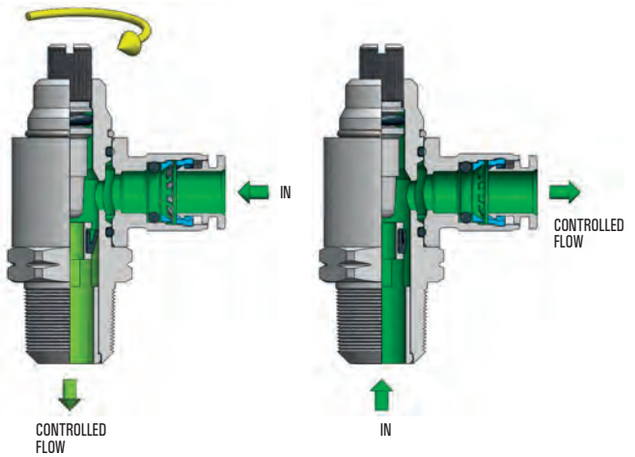
cmatic®
PNEUMATIC FITTINGS

Raccordi a Funzione “Pollici/NPT”
INCH/NPT Function Fittings
Raccords à fonction en pouce/NPT
Funktionsverschraubungen, Zoll/NPT

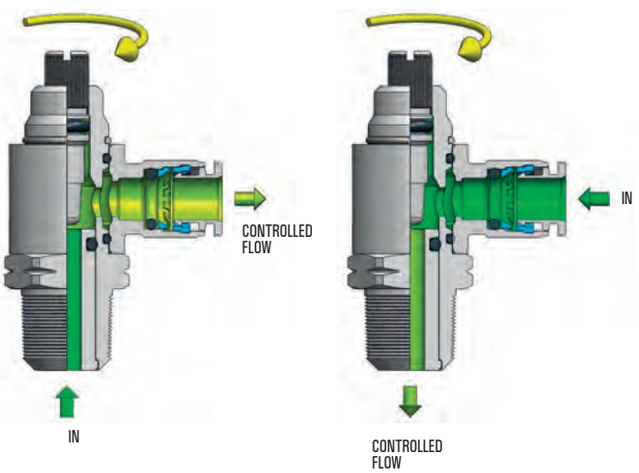
.../C = Regolazione del Flusso in Uscita
Meter out flow control
Réducteur de débit fonctionnant à échappement
Abluftdrosselung



.../V = Regolazione del Flusso in Ingresso
Meter in flow control
Réducteur de débit fonctionnant à l'admission
Zuluftdrosselung



.../B = Regolazione del Flusso in entrambe le direzioni
Bidirectional flow control
Réducteur de débit bidirectionel
Beidseitige Drosselung



Questi dispositivi offrono la possibilità di regolare la portata d'aria in un circuito pneumatico. In base al tipo di regolatore impiegato, la regolazione può avvenire in entrambi i sensi (Regolatore Bidirezionale), oppure in un unico senso (Regolatore Unidirezionale). I Regolatori di Flusso Unidirezionali, risultano particolarmente adatti per la regolazione della velocità di cilindri pneumatici.

They can adjust the flow in a pneumatic circuit. Depending on the flow control used, the setting can be made both ways (Bidirectional Flow Control), or just one way (Unidirectional Flow Control). The Unidirectional Flow Control is particularly used to adjust the speed of pneumatic cylinders.

Leur fonction est d'assurer le réglage du débit dans un circuit pneumatique. Selon le réducteur employé, le réglage peut être effectué dans les deux sens (réducteur bidirectionel) ou dans un seul sens (réducteur unidirectionel). Le réducteur unidirectionel est très utilisé pour le réglage de la vitesse de sortie de tige du vérin pneumatique.

Das Drosselrückschlagventil regelt den Durchfluss in einer pneumatischen Anlage. Je nach dem Drosselventil, kann die Drosselung auf beiden Seiten (beidseitiges Drosselrückschlagventil) oder einfach auf einer Seite erfolgen. (einseitiges Rückschlagventil). Besonders geeignet ist das einseitige Drosselrückschlagventil für die Regulierung der Zylindergeschwindigkeit.

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Regolatore di flusso con raccordo orientabile automatico in ottone

Flow control with swivel push-in fitting

Réducteur de débit avec raccord automatique tournant en laiton

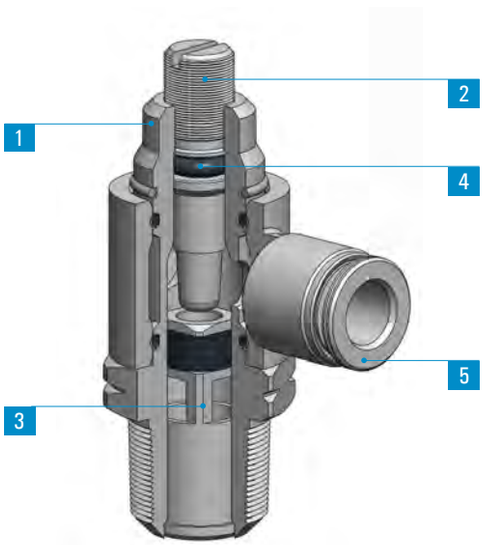
Drosselrückschlagventil mit schwenkbarerSteckverschraubung aus Messing

PV 18

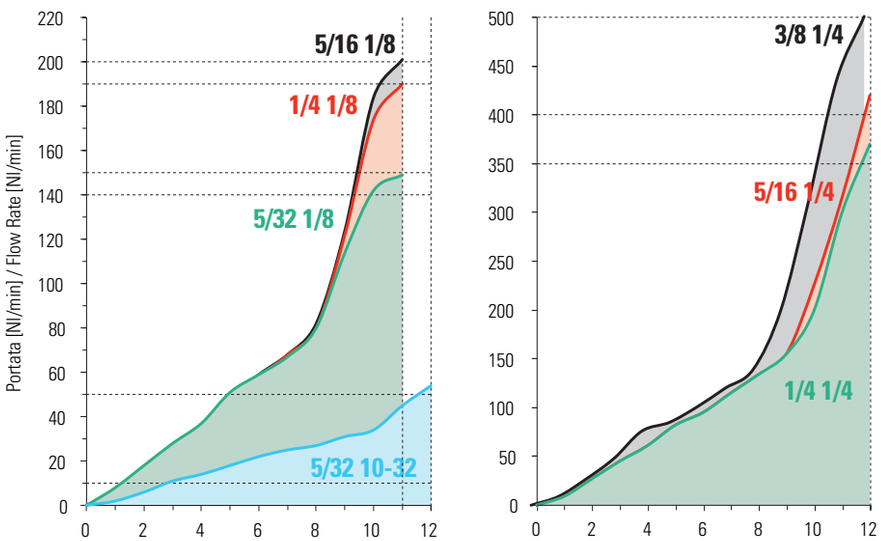
1	2	3	4	5
Corpo Body Corps Körper	Spillo Needle Epingle Nadel	Bussola Cartridge Cartouche Patrone	Guarnizioni Seals Joint d'étancheité Dichtung	Rondelle Gasket Bague Plastique Kunststoffring
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt			NBR NBR NBR NBR	PA6 PA6 PA6 PA6

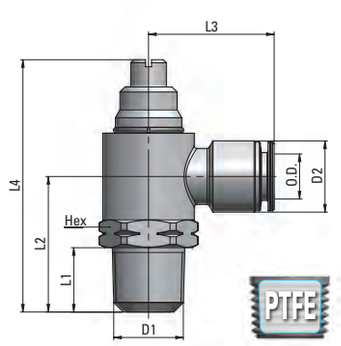
-20°C ÷ 80°C

0 ÷ 10 bar



P = 6 bar - **Δ**p = 1 bar





Type	OD	D1 UNF	D2	L1	L2	L3 max	L4	HEX	g
18 5/32 10-32	5/32	10-32	9,5	5	13,5	18,5	27	6	-

Type	OD	D1 NPTF	D2	L1	L2	L3 max	L4	HEX	g
18 5/32 1/8	5/32	1/8	9,5	8,2	21,2	20,5	41,2	9/16	35,5
18 1/4 1/8	1/4	1/8	12	8,2	21,2	22,5	41,3	9/16	35
18 1/4 1/4	1/4	1/4	12	12,7	26,7	24	49,6	11/16	50
18 5/16 1/8	5/16	1/8	14	8,2	21,2	23	41,2	9/16	38
18 5/16 1/4	5/16	1/4	14	12,7	26,7	24,5	49,6	11/16	61
18 3/8 1/4	3/8	1/4	16	12,7	26,7	26,5	49,6	11/16	65,5

Disponibile nelle versioni:
Available as:

.../C = Meter Out

.../V = Meter In

.../B = Bidirectional

L'anello rimane orientabile anche dopo l'installazione del regolatore.
The banjo ring swivels also after flow control installation.
Les banjos peuvent être orientés après l'installation du réducteur.
Der Schwenkring kann nach der Montage des Drosselrückschlagventiles noch orientiert werden.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato al regolatore.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the flow control.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
en fonction du raccord monté sur le réducteur.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
die Schläuche werden durch die am Drosselrückschlagventil montierte verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

PV 41

Regolatore con raccordo orientabile automatico in ottone e pomolo di regolazione

Brass flow control with swivelling push-in fitting and handwheel

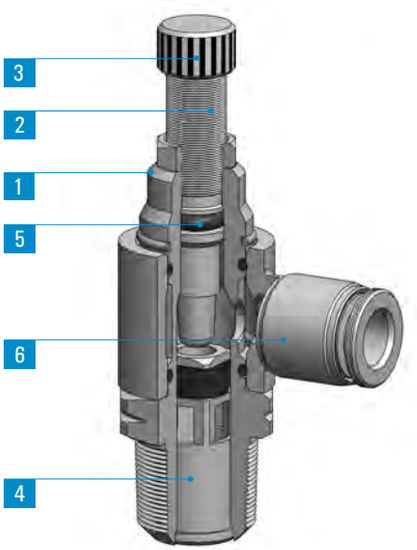
Réducteur de débit avec raccord automatique tournant en laiton et volant moleté

Messing Drosselrückschlagventil mit schwenkbarer Steckverschraubung und Rändelkopf

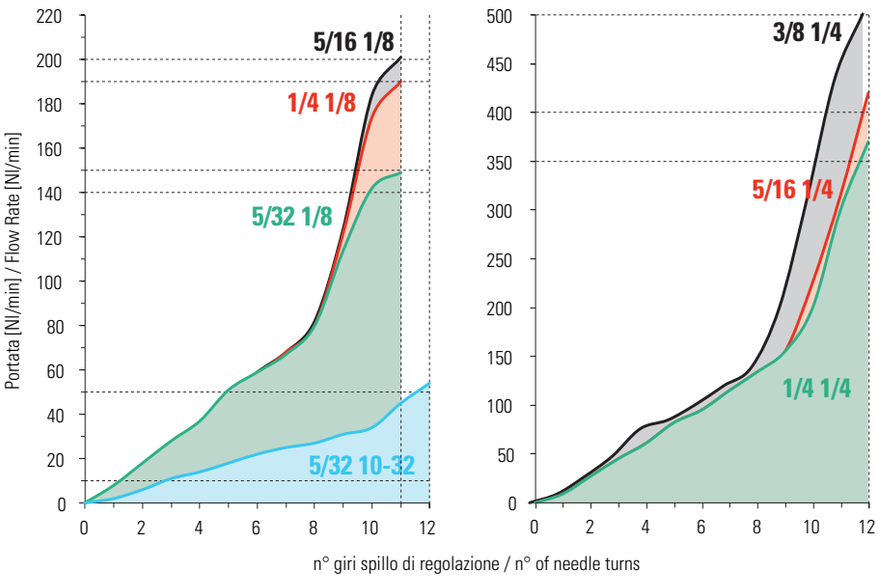
1	2	3	4	5	6
Corpo Body Corps Körper	Spillo Needle Epingle Nadel	Pomolo Handwheel Volant moleté Rändelkopf	Bussola Cartridge Cartouche Patrone	Guarnizioni Seals Joint d'étancheité Dichtung	Raccordo Automatico Push-in fittings Raccords instantanés Steckverschraubungen
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt				NBR NBR NBR NBR	Raccordo Automatico serie PN PN line push-in fittings Raccords instantanés série PN PN Steckverschraubungen

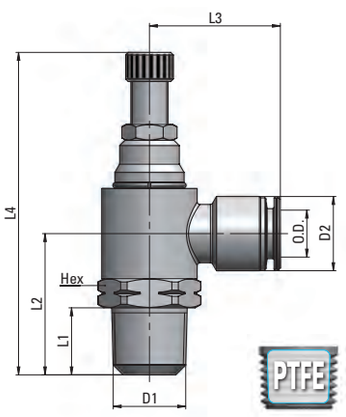
-20°C ÷ 80°C

0 ÷ 10 bar



P = 6 bar - Δp = 1 bar





Type	Tube OD	D1 UNF	D2	L1	L2	L3 max	L4	HEX	g
41 5/32 10-32	5/32	10-32	9,5	5	13,5	18,5	40,5	6	13
Type	**Tube OD**	**D1 NPTF**	**D2**	**L1**	**L2**	**L3 max**	**L4**	**HEX**	**g**
41 5/32 1/8	5/32	1/8	9,5	8,2	21,2	20,5	51,8	9/16	37
41 1/4 1/8	1/4	1/8	12	8,2	21,2	22,5	51,8	9/16	37,5
41 1/4 1/4	1/4	1/4	12	12,7	26,7	24	61,1	11/16	66,5
41 5/16 1/8	5/16	1/8	14	8,2	21,2	23	51,8	9/16	38,5
41 5/16 1/4	5/16	1/4	14	12,7	26,7	24,5	61,1	11/16	66,5
41 3/8 1/4	3/8	1/4	16	12,7	26,7	26,5	61,1	11/16	70

Disponibile nelle versioni:
Available as:

.../C = Meter Out

.../V = Meter In

.../B = Bidirectional

L'anello rimane orientabile anche dopo l'installazione del regolatore.
The banjo ring swivels also after flow control installation.
Les banjos peuvent être orientés après l'installation du réducteur.
Der Schwenkring kann nach der Montage des Drosselrückschlagventiles noch orientiert werden.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
PA11, PA12, PA6, Polietilene PE, Poliuretano PU (95 Shore A)

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
PA11, PA12, PA6, Polyethylene PE, Polyurethane PU (95 Shore A)

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
PA11, PA12, PA6, Polyethylene PE, Polyurethane PU (95 Shore A)

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PA11, PA12, PA6, Polyethylen PE, Polyurethan PU (95 Shore A)

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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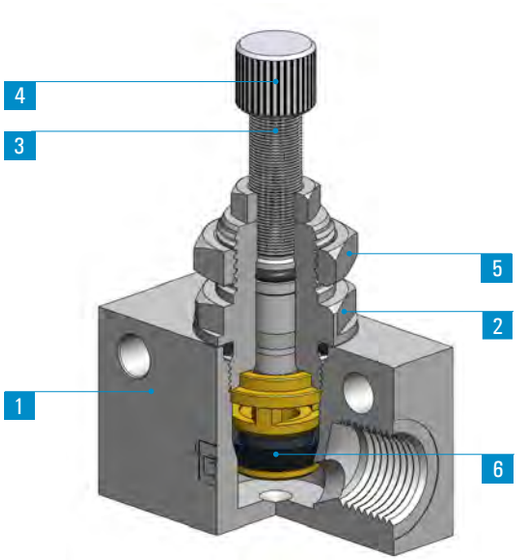
PV 21

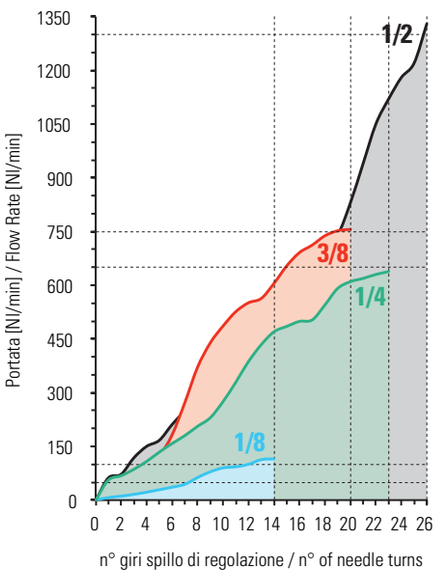
1	2	3	4	5	6
Corpo Body Corps Körper	Regolatore Valve Réducteur de débit Drosselventil	Spillo Needle Epingle Nadel	Pomolo Handwheel Volant moleté Rändelkopf	Dado Nut Ecrou Überwurfmutter	Guarnizioni Seals Joint d'étancheité Dichtung
Alluminio anodizzato Al2011 Anodized aluminium Al2011 Alluminium anodisé Al2011 Eloxiertes Aluminium Al2011	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt				NBR NBR NBR NBR

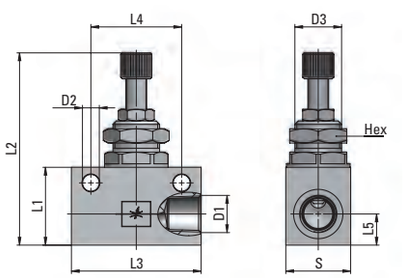
-20°C ÷ 80°C

0 ÷ 10 bar

P = 6 bar - **Δ**p = 1 bar







Type	D1 NPTF	D2	D3	L1	L2 max	L3	L4	L5	S	HEX	g
21 00 1/8	**1/8**	4,5	M12x0,75	21	49,4	34	24	8	16	15	49,5
21 00 1/4	**1/4**	6,5	M18x1,5	30	75,2	50	35	12	25	22	162,5
21 00 3/8	**3/8**	6,5	M18x1,5	30	75,2	58	40	12	25	22	169,1
21 00 1/2	**1/2**	6,5	M22x1,5	40	93,1	65	50	17	30	26	301

Disponibile nelle versioni:
Available as:

.../U = One way

.../B = Bidirectional

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato al regolatore.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the flow control.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
en fonction du raccord monté sur le réducteur.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
die Schläuche werden durch die am Drosselrückschlagventil montierte.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

PV 23

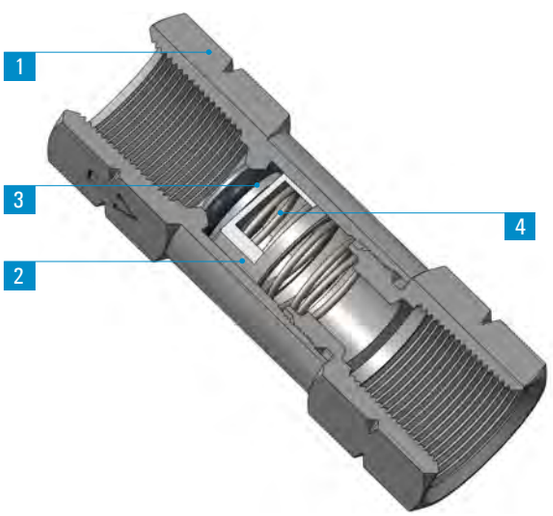
Valvola di non ritorno | Check valve | Clapet anti-retour | Rückschlagventil

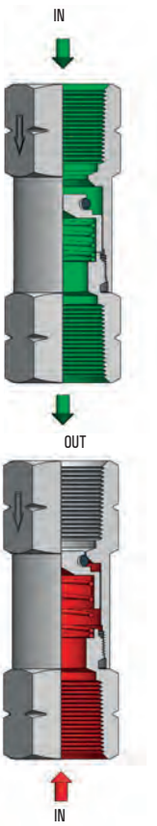
1	2	3	4
Corpo Body Corps Körper	Otturatore Valve Clapet Ventil	Molla Spring Ressort Feder	Guarnizioni Seals Joint d'étancheité Dichtung
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt		Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	NBR NBR NBR NBR

-20°C ÷ 80°C

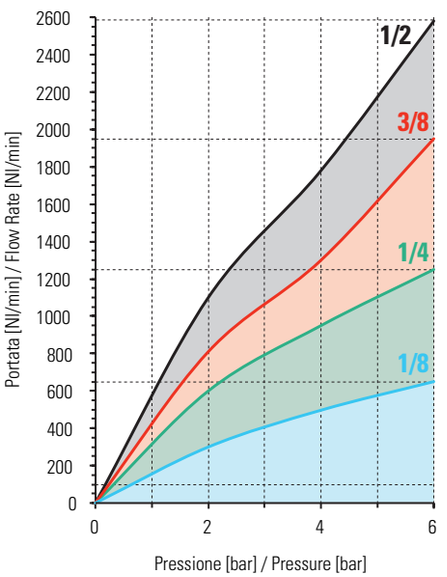
2 ÷ 10 bar

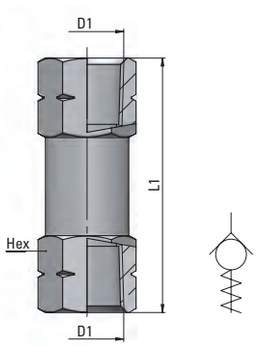
0,2 bar





P = 6 bar - Δp = 1 bar





Type	D1 NPTF	L1	HEX	g
23 00 1/8	1/8	39,5	13	27,1
23 00 1/4	1/4	48	16	42,9
23 00 3/8	3/8	52	20	74,4
23 00 1/2	1/2	62	24	121,6

Queste valvole permettono il passaggio dell'aria in un unico senso (indicato sul corpo della valvola da una freccia) impedendolo in senso contrario.

The flow is allowed only in one way (the arrow direction engraved on the body) and stopped in the reverse way.

Il permet le passage du débit dans un seul sens (celui marqué sur le corps de la vanne par une flèche) tout en empêchant son retour dans le sens contraire.

Der Durchfluss wird nur einseitig erlaubt. Im Allgemeinen ist es die Richtung entsprechend dem auf dem Rückschlagventilskörper gekennzeichneten Pfeil. Die andere Seite bleibt abgesperrt.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato alla valvola.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the valve.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
en fonction du raccord monté sur la vanne.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Die Schläuche werden durch die am Schnellentlüftungsventil montierte Verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

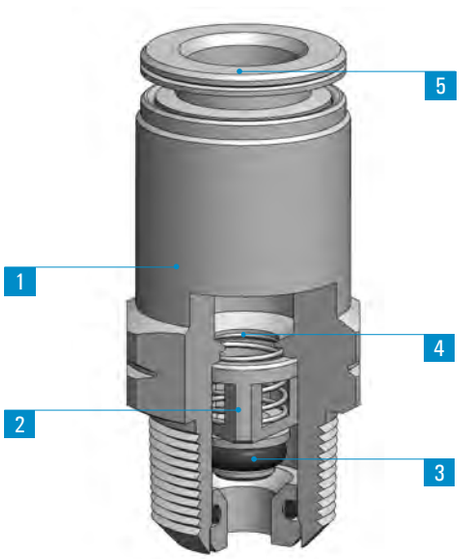
trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

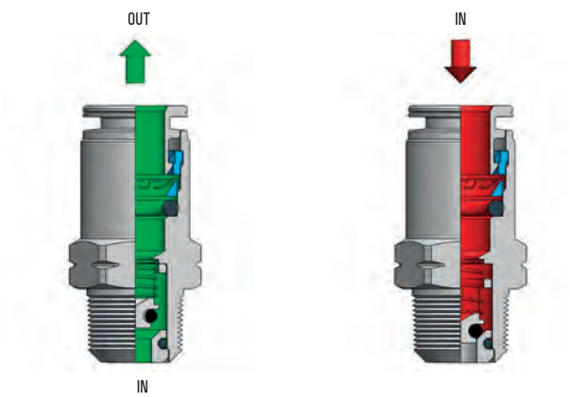
Raccordo diritto con valvola di non ritorno | Straight connection with check valve | Union simple avec clapet anti-retour | Gerade Verschraubung mit Rückschlagventil

PV 33

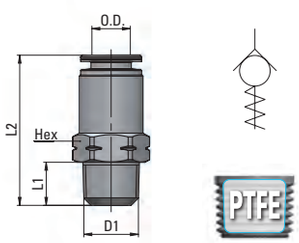
1	2	3	4	5
Corpo Body Corps Körper	Otturatore Valve Clapet Ventil	Guarnizioni Seals Joint d'étancheité Dichtung	Molla Spring Ressort Feder	Raccordo Automatico Push-in fittings Raccords instantanés Steckverschraubungen
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt		NBR NBR NBR NBR	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	Raccordo Automatico serie PN PN line push-in fittings Raccords instantanés série PN PN Steckverschraubungen

-20°C ÷ 80°C | 2 ÷ 10 bar | 0,2 bar





Meter Out Version



Meter Out Version

Type	Tube OD	D1 NPTF	L1	L2	HEX	g
33 1/4 1/8	**1/4**	**1/8**	8,2	28,2	13	-
33 1/4 1/4	**1/4**	**1/4**	13	32	14	-

Queste valvole permettono il passaggio dell'aria in un unico senso (indicato sul corpo della valvola da una freccia) impedendolo in senso contrario.

The flow is allowed only in one way (the arrow direction engraved on the body) and stopped in the reverse way.

Il permet le passage du débit dans un seul sens (celui marqué sur le corps de la vanne par une flèche) tout en empêchant son retour dans le sens contraire.

Der Durchfluss wird nur einseitig erlaubt. Im Allgemeinen ist es die Richtung entsprechend dem auf dem Rückschlagventilskörper gekennzeichneten Pfeil. Die andere Seite bleibt abgesperrt.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato alla valvola.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the valve.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
en fonction du raccord monté sur la vanne.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Die Schläuche werden durch die am Schnellentlüftungsventil montierte Verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

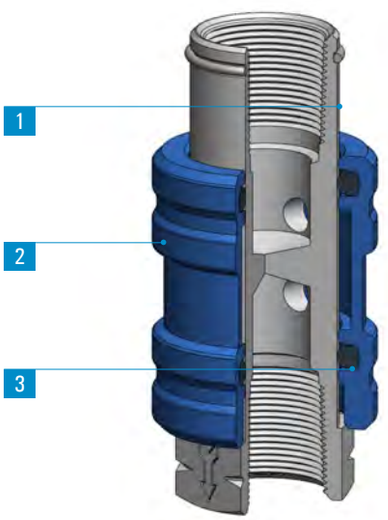
PV 26

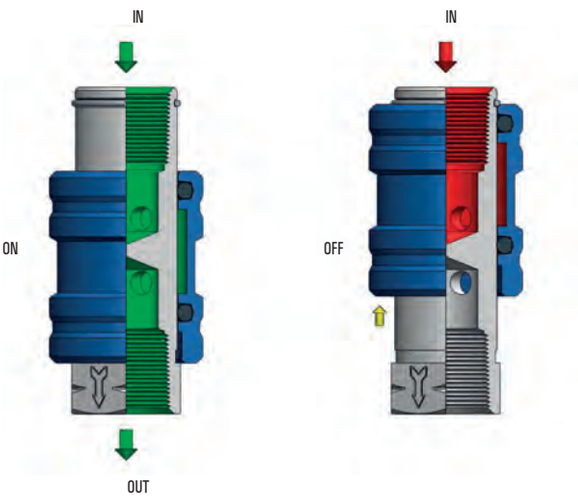
Valvola a corsoio | Slide valve | Vanne à douille coulissante | Handschieberventil

1	2	3
Corpo Body Corps Körper	Manicotto Sleeve Douille Hülse	Guarnizioni Seals Joint d'étancheité Dichtung
Ottone UNI EN 12164 CW614N Cromato Brass UNI EN 12164 CW614N Chrome plated Laiton UNI EN 12164 CW614N chromé Ms Verchromt UNI EN 12164 CW614N	Alluminio Anodizzato Al6060 Anodised Aluminium Al6060 Aluminium Anodisé Al6060 Eloxiertes Aluminium Al6060	NBR NBR NBR NBR

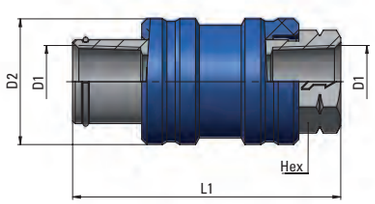
-20°C ÷ 80°C

0 ÷ 10 bar

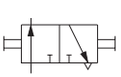




Portata Flow rate Débit Druckfluß (6 bar - Δp = 1bar)	IN OUT 1→2
PV 26 00 18	620 Nl/min
PV 26 00 14	920 Nl/min
PV 26 00 38	1520 Nl/min
PV 26 00 12	2720 Nl/min



Type	D1 NPTF	D2	L1	HEX	g
26 1/8 1/8	1/8	21	46	14	50
26 1/4 1/4	1/4	24	51,2	17	85
26 3/8 3/8	3/8	31	58,9	22	116,5
26 1/2 1/2	1/2	34,7	72,5	26	-



Queste valvole hanno lo scopo di sezionare un impianto. Facendo scorrere la ghiera anodizzata si ottengono i due stati possibili (ON-OFF) del circuito. Quando la ghiera è in battuta sull'esagono dello stelo, l'aria fluisce nella direzione indicata dalla freccia stampigliata (ON); facendo retrocedere la ghiera si toglie alimentazione mandando in scarico il circuito (OFF).

The valve is used to section a pneumatic installation. Sliding the sleeve on the rod, both ON and OFF positions can be achieved. When the sleeve is against the rod hexagon, the flow goes in the arrow direction (ON); pushing it backwards the air supply is cut off and the installation is vented (OFF).

La fonction de ces vannes est de séctionner une installation. En faisant coulisser la douille anodisée, on selectionne la position ON ou la position OFF du circuit. Si la douille se trouve au niveau du six-pans, le débit passe dans le sens indiqué par la fèche (ON); en faisant coulisser la douille, on coupe l'alimentation et l'air échappe du circuit (OFF).

Der Zweck dieses Ventiles ist die Anlage vom Druckluftnetz zu trennen. Schieb t man die eloxierte Hülse, wird die Anlage ein-bzw-ausgeschaltet. Steht die Schiebehülse in Pfeilrichtung am Spindelsechskant, fliesst die Luft entsprechend der geprägten Pfeilrichtung (EIN). Beim Zurückschieben der Hülse wird der Lufteingang gesperrt, und die Anlage entlüftet entgegen der Pfeilrichtung (AUS)

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato alla valvola.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the valve.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
en fonction du raccord monté sur la vanne.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Die Schläuche werden durch die am Schnellentlüftungsventil montierte Verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

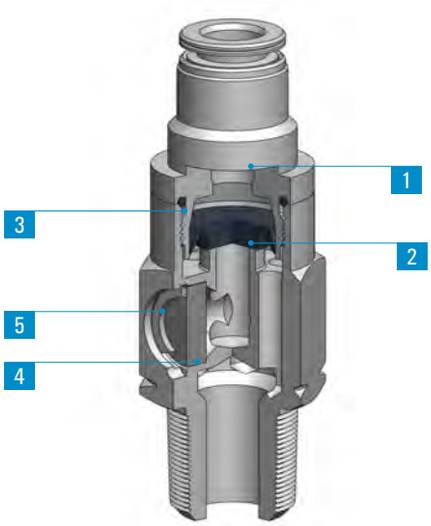
Valvola di scarico rapido in linea | In line quick exhaust valve | Vanne à échappement rapide en ligne | Schnellentlüftungsventil in Linie

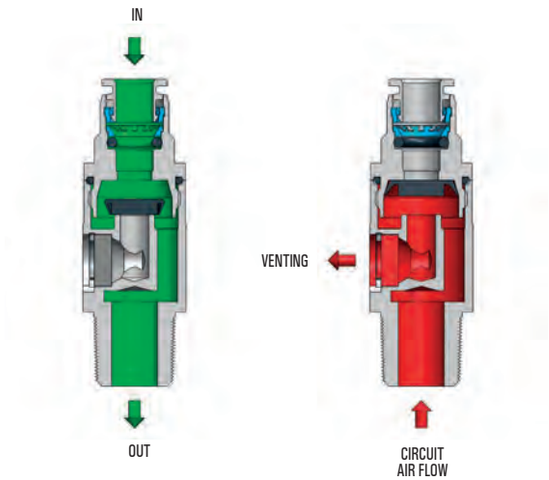
PV 22

1	2	3	4	5
Corpo Body Corps Körper	Guarnizione a labbro Lip ring Joint à lévre Lippendichtung	Guarnizioni Seals Joint d'étancheité Dichtung	Silenziatore Muffler Silencieux Schalldämpfer	Seeger
Alluminio Anodizzato Al2011 Anodised Aluminium Al2011 Aluminium Anodisé Al2011 Eloxiertes Aluminium Al2011	PU - NBR solo per 1/4 PU - NBR only for 1/4 PU - NBR seulement pour 1/4 PU - NBR nur bei 1/4	NBR NBR NBR NBR	Acciaio Inox AISI 316 Stainless Steel AISI 316 Acier Inox AISI 316 Edelstahl AISI 316	Acciao C75 Zincato C75 Steel zinc coated Acier C75 zingué C75 Stahl verzinkt

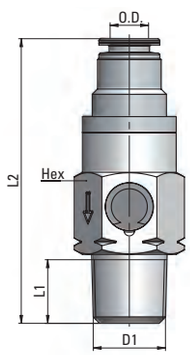
-20°C ÷ 80°C

2 ÷ 10 bar

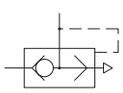




Portata a 6 bar Flow rate at 6 bar Débit à 6 bar Druckfluß (6 bar)	IN OUT 1→2	OUT VENT 2→3
1/4	1050 Nl/min	660 Nl/min
3/8	3000 Nl/min	1900 Nl/min
1/2	3420 Nl/min	2280 Nl/min



Type	Tube OD	D1 NPTF	L1	L2	HEX	g
22 1/4 1/4	1/4	1/4	13	53,5	18	19,7
22 3/8 3/8	3/8	3/8	13	66	27	-
22 1/2 1/2	1/2	1/2	17	79	34	-



Valvola in grado di scaricare rapidamente l'aria contenuta in un circuito in caso di mancanza d'alimentazione; se applicate ad un cilindro permettono di aumentarne la velocità.

This valve can easily vent the circuit in case of an air supply failure. If assembled on the cylinder port, it increases the cylinder speed.

Cette vanne permet de mettre à l'échappement un circuit en cas de défaut d'alimentation. Raccordée sur un vérin, elle permet d'augmenter la vitesse du débit d'échappement et de ce fait d'augmenter sa vitesse de fonctionnement.

Dieses Ventil kann bei Luftmangel die Anlage schnell entlüften. Wenn am Zylinderausgang montiert, wird dessen Geschwindigkeit vergrössert.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato alla valvola.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the valve.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
en fonction du raccord monté sur la vanne.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Die Schläuche werden durch die am Schnellentlüftungsventil montierte Verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

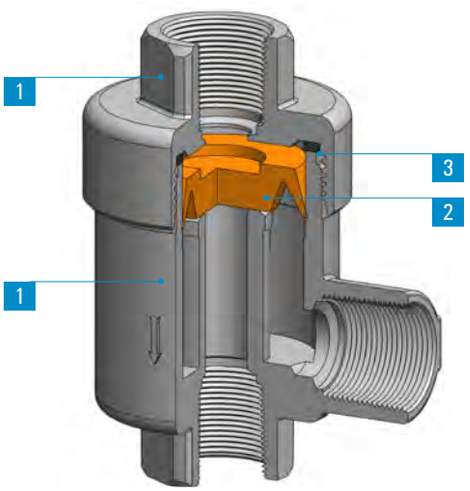
PV 27

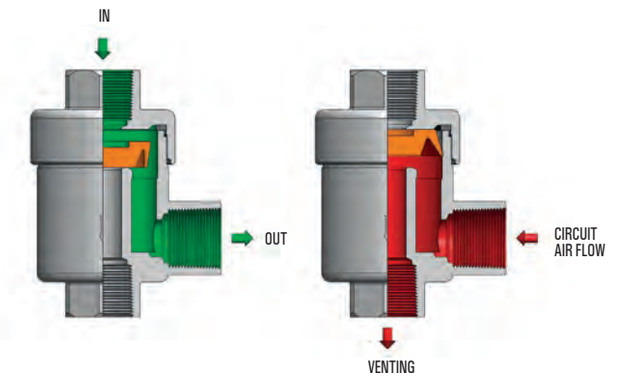
Valvola di scarico rapido | Quick exhaust valve | Vanne à échappement rapide | Schnellentlüftungsventil

1	2	3
Corpo Body Corps Körper	Guarnizione a labbro Lip ring Joint à lévre Lippendichtung	Rondelle Gasket Bague Plastique Kunststoffring
Ottone UNI EN 12165 CW617N Nichelato Brass UNI EN 12165 CW617N Nickel plated Laiton UNI EN 12165 CW617N Nickelé Messing UNI EN 12165 CW617N vernickelt	PU - NBR solo per M5 PU - NBR only for M5 PU - NBR seulement pour M5 PU - NBR nur bei M5	PA6 PA6 PA6 PA6

-20°C ÷ 80°C

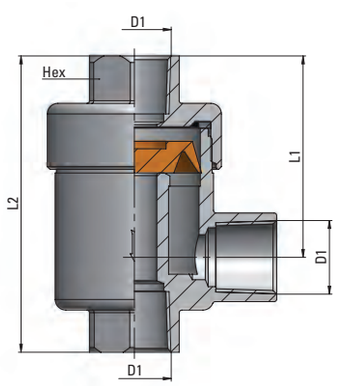
2 ÷ 10 bar



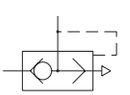


Portata Flow rate Débit Druckfluß (6 bar - Δp = 1bar)	IN OUT 1→2	OUT VENT 2→3
1/8	450 Nl/min	760 Nl/min
1/4	780 Nl/min	1840 Nl/min
3/8	1160 Nl/min	2600 Nl/min
1/2	1260 Nl/min	5300 Nl/min
3/4 (3 bar)	1530 Nl/min	3300 Nl/min

*Portata a 3 bar - Flow rate at 3 bar
Débit à 3 bar - Druckfluß (3 bar)



Tipo	D1 NPTF	L1	L2	HEX	g
27 00 1/8	1/8	28	42	14	84,2
27 00 1/4	1/4	34,5	53	19	147,7
27 00 3/8	3/8	36	55	21	163,7
27 00 1/2	1/2	44	71	26	314,9
27 00 3/4	3/4	55	90	32	511



Valvola in grado di scaricare rapidamente l'aria contenuta in un circuito in caso di mancanza d'alimentazione; se applicate ad un cilindro permettono di aumentarne la velocità.

This valve can easily vent the circuit in case of an air supply failure. If assembled on the cylinder port, it increases the cylinder speed.

Cette vanne permet de mettre à l'échappement un circuit en cas de défaut d'alimentation. Raccordée sur un vérin, elle permet d'augmenter la vitesse du débit d'échappement et de ce fait d'augmenter sa vitesse de fonctionnement.

Dieses Ventil kann bei Luftmangel die Anlage schnell entlüften. Wenn am Zylinderausgang montiert, wird dessen Geschwindigkeit vergrössert.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato alla valvola.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the valve.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
en fonction du raccord monté sur la vanne.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Die Schläuche werden durch die am Schnellentlüftungsventil montierte Verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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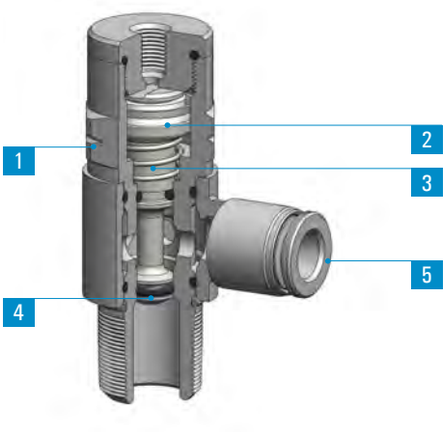
PV 45

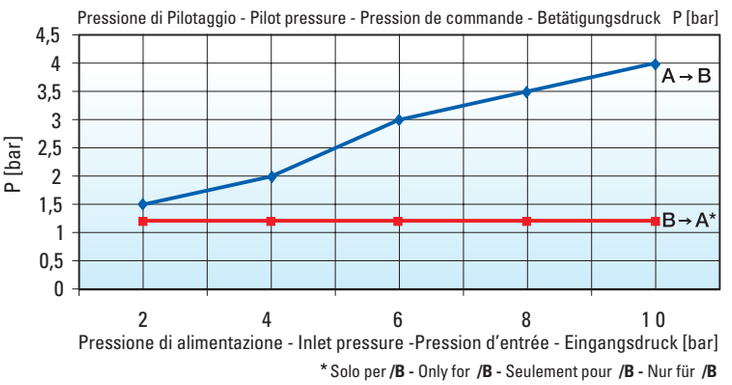
Valvola di blocco | Pilot operated check valve | Vanne d'arrêt | Sperrventil

1	2	3	4	5
Corpo Body Corps Körper	Pistone Piston Piston Kolben	Molla Spring Ressort Feder	Guarnizioni Seals Joint d'étancheité Dichtung	Raccordo Automatico Push-in fittings Raccords instantanés Steckverschraubungen
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt	Acciaio Inox AISI 304 Stainless Steel AISI 304 Acier Inox AISI 304 Edelstahl AISI 304	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	NBR-PU NBR-PU NBR-PU NBR-PU	Raccordo Automatico serie PN PN line push-in fittings Raccords instantanés série PN PN Steckverschraubungen

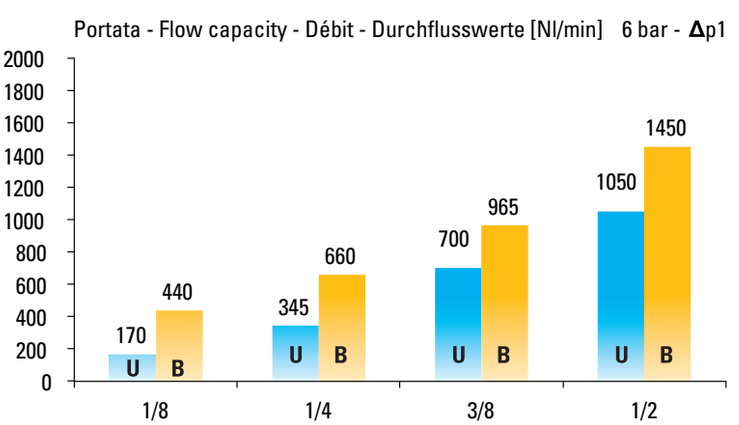
-20°C ÷ 80°C

max 10 bar





* Solo per **/B** - Only for **/B** - Seulement pour **/B** - Nur für **/B**



Le valvole di blocco pilotate, se montate in coppia su un cilindro, in caso di una diminuzione improvvisa della pressione di comando, assicurano che ogni movimento del cilindro venga impedito.
Mediante il dispositivo di sblocco, è possibile ripristinare manualmente la corsa del pistone, cosa particolarmente utile in fase di messa a punto oppure in mancanza d'aria.

Should a sudden pressure failure happen, if the stop valves are assembled in pairs on the cylinder, the stop valves make sure, that the cylinder piston rapidily stops. By operating the override device, it is possible to reset manually the piston stroke, which is particularly important during a set-up phase or in case of air shortage.

La vanne d'arrêt pilotée permet, si montée en couple sur un vérin, de bloquer instantanément le déplacement de la tige du vérin en cas de chute brutale de la pression. Une commande manuelle permet de réalimenter le vérin. Cette fonctionnalité est particulièrement intéressante pendent la mise au point d'une machine ou en cas de problème sur l'alimentation d'air.

Wenn zwei Sperrventile am Zylinderanschluss montiert werden, bei plötzlichem Druckabfall halten sie den Zylinderkolben schlagartig an. Mittels der Handbetätigung kann man den Kolbenhub noch laufen lassen, was bei einer Einrichtungsphase oder aber bei Luftausfall besonders vorteilhaft ist.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
Variabili in funzione del tipo di raccordo collegato allla valvola.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the valve.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
En fonction du raccord monté sur la vanne.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Die Schläuche werden durch die am Schnellentlüftungsventil montierte Verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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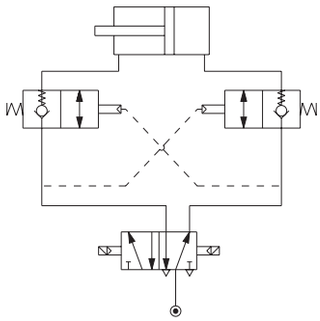
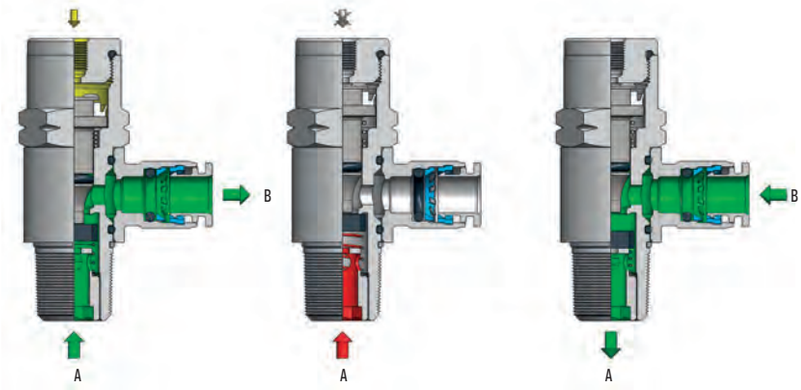
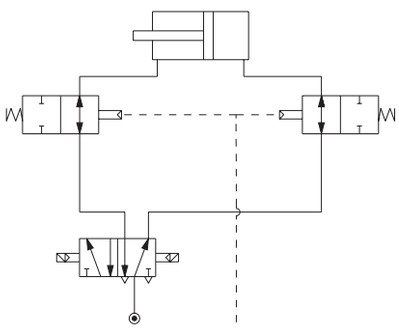
/U = One Way



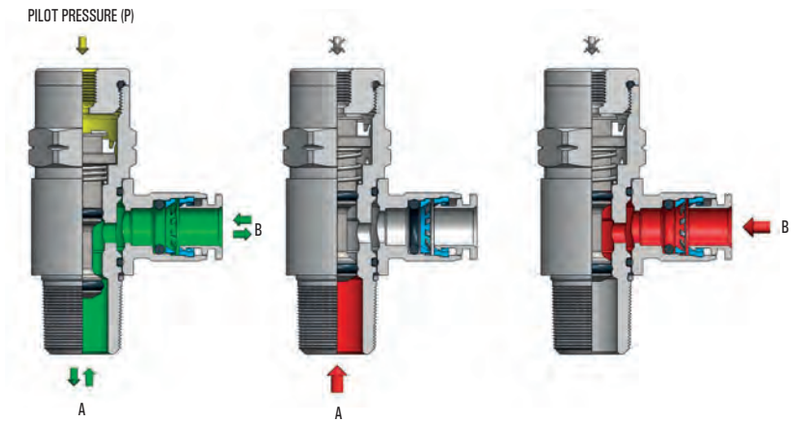
PILOT PRESSURE (P)

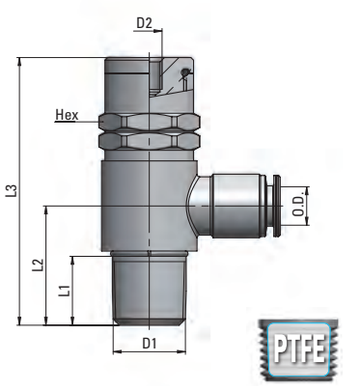


/B = Bidirectional



PILOT PRESSURE (P)

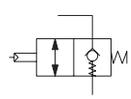




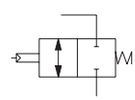
Type	Tube OD	D1 NPTF	D2 UNF	L1	L2	L3	HEX	g
45 1/4 1/8	**1/4**	**1/8**	10-32	9,5	17	42,8	13	40,1
45 1/4 1/4	**1/4**	**1/4**	10-32	14	22,5	50,5	17	69,8
Type	Tube OD	D1 NPTF	D2 NPTF	L1	L2	L3	HEX	g
45 3/8 3/8	**3/8**	**3/8**	1/8	14	24	58,5	20	117,6
45 1/2 1/2	**1/2**	**1/2**	1/8	18,2	30,2	67,7	25	193,8

Disponibile nelle versioni:
Available as:

.../U = One way



.../B = Bidirectional



PV 46

Interruttore pneumatico | Pneumatic switch | Vanne à levier basculant | Kipphebelventil

1	2	3	4	5
Corpo Body Corps Körper	Leva Handle Levier Hebel	Guarnizioni Seals Joint d'étancheité Dichtung	Molla Spring Ressort Feder	Raccordo Automatico Push-in fittings Raccords instantanés Steckverschraubungen
Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Messing UNI EN 12164 CW614N vernickelt		NBR NBR NBR NBR	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	Raccordo Automatico serie PN PN line push-in fittings Raccords instantanés série PN PN Steckverschraubungen

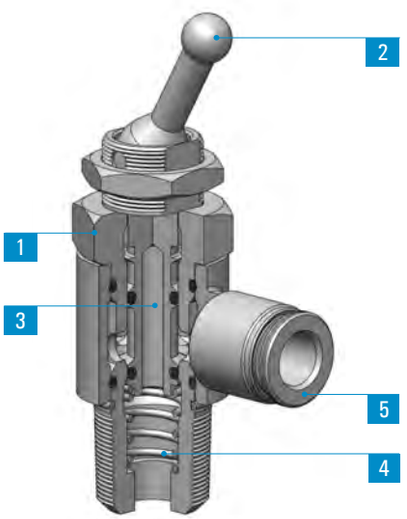
-20°C ÷ 80°C

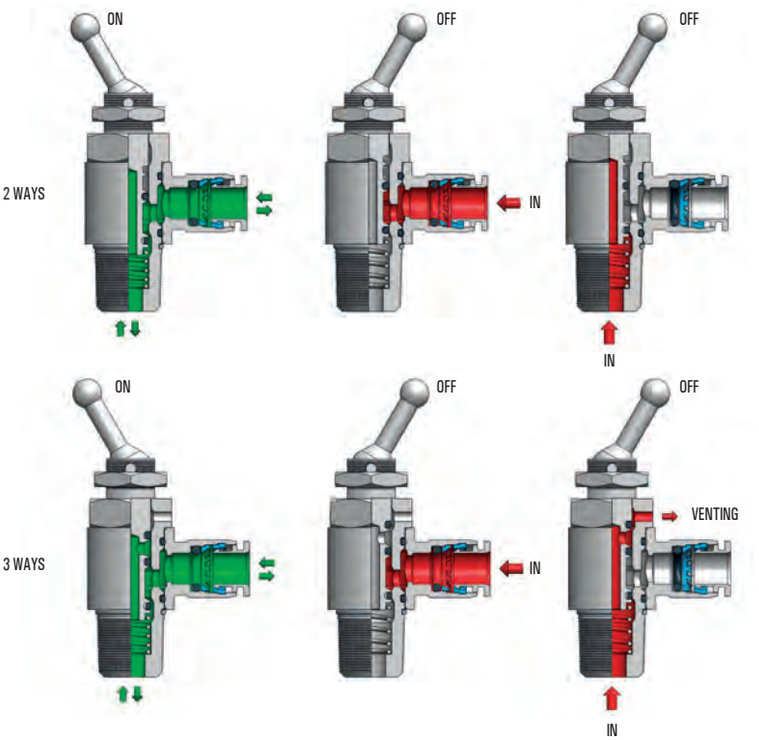
max 15 bar

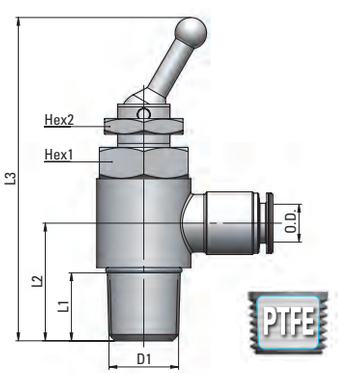
Portata
Flow rate
Débit
Druckfluß

(6 bar · Δp = 1bar)

1/8	235 Nl/min
1/4	265 Nl/min

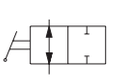




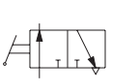


PTFE

Type	Tube OD	D1 NPTF	L1	L2	L3	CH1	CH2	g
46 1/4 1/8	1/4	1/8	9,5	17	54,3	14	15	39,8
46 1/4 1/4	1/4	1/4	14	22,5	61,8	17	15	63,3



2 WAYS



3 WAYS

Queste valvole hanno la funzione di sezionare un circuito (ON/OFF) semplicemente azionando la leva di comando; disponibili nelle versioni a 2 vie e a 3 vie, con l'impiego della valvola a 3 vie, oltre al sezionamento del circuito a valle dell'interruttore si ottiene anche lo scarico dello stesso in atmosfera.

The PV 46 is a pneumatic switch. It is available in a 2/2 and 3/2-way version. The goal of the 2/2 way switch is to cut off the flow in the circuit whenever needed by simply operating the lever. The 3/2 way valve cuts off the flow and vents to atmosphere the terminal part of the circuit.

Notre PV 46 est une vanne à levier basculant. Elle est disponible en deux versions: 2/2 et 3/2 voies. La vanne à 2 voies permet d'interrompre le débit dans un circuit pneumatique par un simple mouvement du levier de la vanne. Avec la version à 3 voies on n'achève pas seulement l'interruption du débit, mais on permet aussi l'échappement en atmosphère de la partie à val du circuit.

Unser PV 46 ist in zwei Ausführungen verfügbar und zwar als 2/2 oder als 3/2 Wege-Kipphebelventil. Das 2 Wege-Kipphebelventil dient vorwiegend dazu, die Druckluft in einer Anlage mit einer einfachen Handbewegung des Hebels auszuschalten. Das 3/2 Wege-Kipphebelventil ermöglicht die Ausschaltungsfunktion der Druckluft und dazu auch die Entlüftung in die Atmosphäre vom Teil der Anlage, der sich nach dem Ventil befindet.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato alla valvola.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the valve.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
en fonction du raccord monté sur la vanne.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Die Schläuche werden durch die am Schnellentlüftungsventil montierte Verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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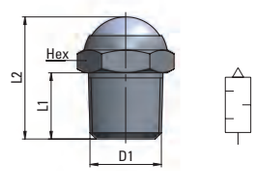
	Corpo Body Corps Körper	Silenziatore Muffler Silencieux Schalldämpfer	bar	
PV11-FE	Ottone UNI EN 12164 CW614N Nichelato Brass UNI EN 12164 CW614N Nickel plated Laiton UNI EN 12164 CW614N Nickelé Ms Vernickelt UNI EN 12164 CW614N	Acciaio Inox AISI 304 Stainless Steel AISI 304 Acier Inox AISI 304 Edelstahl AISI 304	0 ÷ 12 bar	-10 ÷ 70 °C
PV11-BE	Ottone UNI EN 12164 CW614N Brass UNI EN 12164 CW614N Laiton UNI EN 12164 CW614N Ms UNI EN 12164 CW614N	Bronzo Sinterizzato 89/11 Sintered bronze 89/11 Bronze fritté 89/11 Sinterbronze 89/11	0 ÷ 12 bar	-10 ÷ 70 °C

PV 11-FE

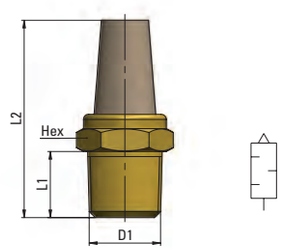
Silenziatore in ottone con filo in acciaio inox | Air muffler with stainless steel wire | Silencieux avec fil acier inox | Schalldämpfer mit Edelstahldraht



Type	D1 NPT	L1	L2	HEX	g
11 00 1/8-FE	**1/8**	6	15	13	6,2
11 00 1/4-FE	**1/4**	11	22	16	12,4
11 00 3/8-FE	**3/8**	11	23	19	19
11 00 1/2-FE	**1/2**	13	25	24	27,7

PV 11-BE

Silenziatore in bronzo sinterizzato | Sintered bronze air muffler | Silencieux en bronze fritté | Schalldämpfer aus Sinterbronze



Type	D1 NPT	L1	L2	HEX	g
11 00 1/8-BE	**1/8**	6	29	13	9
11 00 1/4-BE	**1/4**	11	36	16	17
11 00 3/8-BE	**3/8**	11	43	19	29
11 00 1/2-BE	**1/2**	13	49	24	46

VX LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi a Funzione in Acciaio Inox 316L
316L Stainless Steel Function Fittings
Raccords à fonction en Acier Inox 316L
Funktionsverschraubungen aus Edelstahl 1.4404

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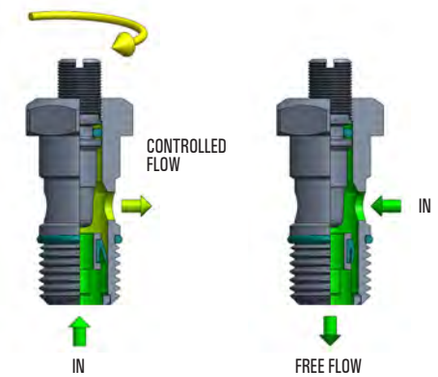
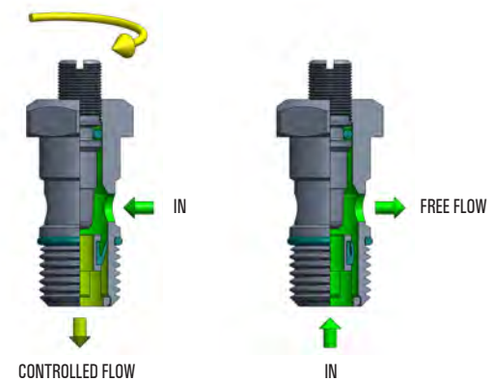
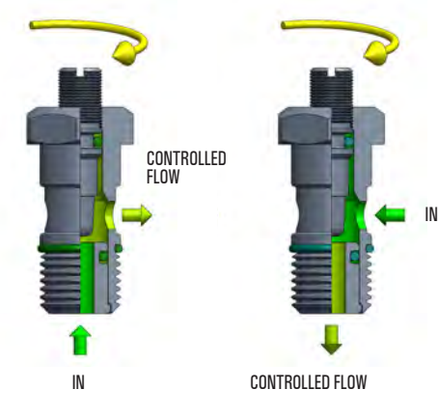
.../C = Regolazione del Flusso in Uscita
Meter out flow control
Réducteur de débit fonctionnant à échappement
Abluftdrosselung



.../V = Regolazione del Flusso in Ingresso
Meter in flow control
Réducteur de débit fonctionnant à l'admission
Zuluftdrosselung



.../B = Regolazione del Flusso in entrambe le direzioni
Bidirectional flow control
Réducteur de débit bidirectionel
Beidseitige Drosselung



Questi dispositivi offrono la possibilità di regolare la portata d'aria in un circuito pneumatico. In base al tipo di regolatore impiegato, la regolazione può avvenire in entrambi i sensi (Regolatore Bidirezionale), oppure in un unico senso (Regolatore Unidirezionale). I Regolatori di Flusso Unidirezionali, risultano particolarmente adatti per la regolazione della velocità di cilindri pneumatici.

They can adjust the flow in a pneumatic circuit. Depending on the flow control used, the setting can be made both ways (Bidirectional Flow Control), or just one way (Unidirectional Flow Control). The Unidirectional Flow Control is particularly used to adjust the speed of pneumatic cylinders.

Leur fonction est d'assurer le réglage du débit dans un circuit pneumatique. Selon le réducteur employé, le réglage peut être effectué dans les deux sens (réducteur bidirectionel) ou dans un seul sens (réducteur unidirectionel). Le réducteur unidirectionel est très utilisé pour le réglage de la vitesse de sortie de tige du vérin pneumatique.

Das Drosselrückschlagventil regelt den Durchfluss in einer pneumatischen Anlage. Je nach dem Drosselventil, kann die Drosselung auf beiden Seiten (beidseitiges Drosselrückschlagventil) oder einfach auf einer Seite erfolgen. (einseitiges Rückschlagventil). Besonders geeignet ist das einseitige Drosselrückschlagventil für die Regulierung der Zylindergeschwindigkeit.

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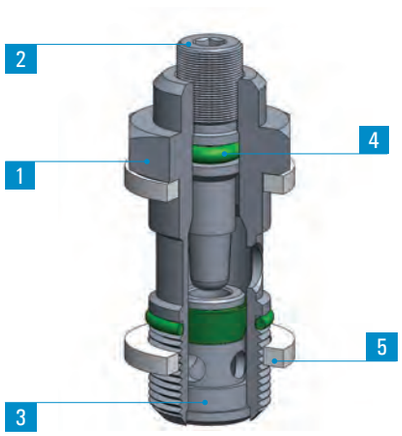
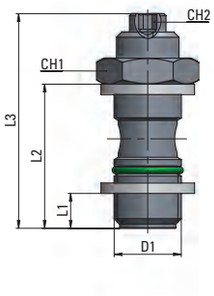
1	2	3	4	5
Corpo Body Corps Körper	Spillo Needle Epingle Nadel	Bussola Cartridge Cartouche Patrone	Guarnizioni Seals Joint d'étancheité Dichtung	Rondella Gasket Rondelle Dichtring
Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404)			FPM conforme FDA FPM Compliant With FPM comforme à FDA FPM, FDA Konform	PTFE PTFE PTFE PTFE

-20°C ÷ 150°C 0 ÷ 10 bar





Type	D1	L1	L2	L3 max	CH1	CH2	g
15 00 18	G1/8	5,1	22,1	32,9	14	2,5	18,3
15 00 14	G1/4	6,4	27,4	41,8	17	3	34,5

Disponibile nelle versioni: Available as:

.../C

.../V

.../B

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato al regolatore.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the flow control.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
en fonction du raccord monté sur le réducteur.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
die Schläuche werden durch die am Drosselrückschlagventil montierte verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

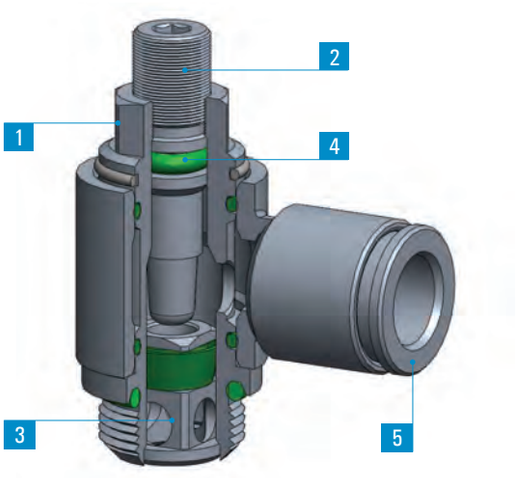
VX 18

Regolatore con raccordo orientabile automatico | Flow Control with swivelling push-in fitting | Réducteur de débit avec raccord automatique tournant | Drosselrückschlagventil mit schwenkbarer Steckverschraubung

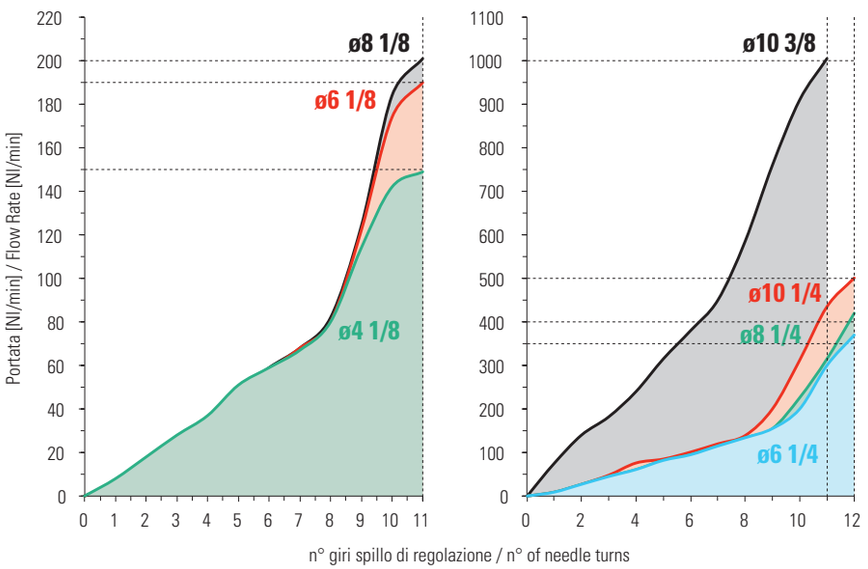
1	2	3	4	5
Corpo Body Corps Körper	Spillo Needle Epingle Nadel	Bussola Cartridge Cartouche Patrone	Guarnizioni Seals Joint d'étancheité Dichtung	Anello Banjo Ring Banjo Steckverschraubungen
Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404)			FPM FPM FPM FPM	Raccordo Automatico serie MX MX line push-in fittings Raccords instantanés série MX MX Steckverschraubungen

-20°C ÷ 150°C

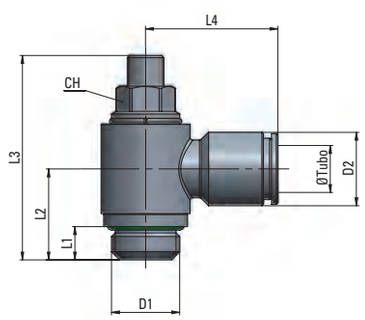
0 ÷ 10 bar



P = 6 bar - Δp = 1 bar



L'anello rimane orientabile anche dopo l'installazione del regolatore.
The banjo ring swivels also after flow control installation.
Les banjos peuvent être orientés après l'installation du réducteur.
Der Schwenkring kann nach der Montage des Drosselrückschlagventiles noch orientiert werden.



Type	Ø Tubo	D1	D2	L1	L2	L3 max	L4	CH	g
18 04 18	4	G1/8	9	5,1	15	32,9	20,5	9	26
18 06 18	6	G1/8	12	5.1	15	32.9	22.5	9	28,8
18 06 14	6	G1/4	12	6.4	17.4	39	24	10	43,1
18 08 18	8	G1/8	14	5.1	15	32.9	23	9	29,5
18 08 14	8	G1/4	14	6.4	17.4	39	25	10	45,4
18 10 14	10	G1/4	16	6.4	17.4	39	27	10	47
18 10 38	10	G3/8	16	7	20	50	26	14	85,2

Disponibile nelle versioni: Available as: .../C .../V .../B

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
Tubo in PVDF, Tubo in PTFE.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
PVDF and PTFE tubings.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
Tube PVDF et Tube PTFE.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PVDF, PTFEschlauch.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

Regolatore di flusso in linea | In-line flow control | Réducteur de débit en ligne | Drosselrückschlagventil

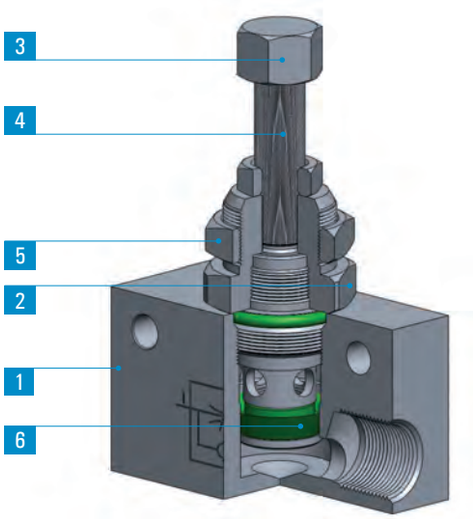
VX 21

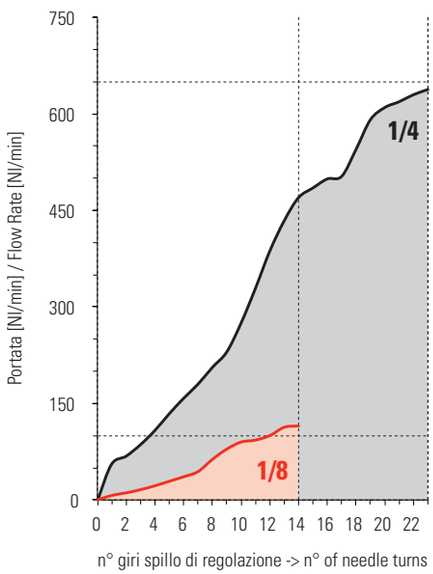
1	2	3	4	5	6
Corpo Body Corps Körper	Regolatore Needle valve Réducteur de débit Drosselventil	Pomolo Handwheel Volant moleté Rändelkopf	Spillo Needle Epingle Nadel	Dado Nut Ecrou Überwurfmutter	Guarnizioni Seals Joint d'étancheité Dichtung
Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404)					FPM FPM FPM FPM

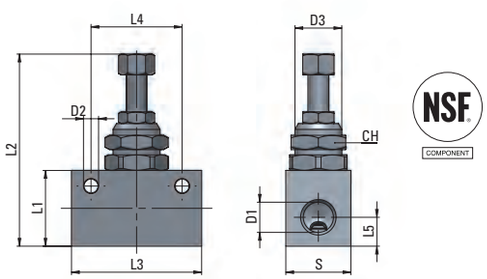
-20°C ÷ 150°C

0 ÷ 10 bar

P = 6 bar - **Δ**p = 1 bar







Type	D1	D2	D3	L1	L2 max	L3	L4	L5	S	CH	g
21 00 18	G1/8	4,5	M12x0,75	20	51.6	34	24	7,5	15	14	72,5
21 00 14	G1/4	5.4	M18x1	30	74.6	50	35	12	25	21	281,4

Disponibile nelle versioni:
Available as:

.../U =

.../B

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato al regolatore.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the flow control.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
en fonction du raccord monté sur le réducteur.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
die Schläuche werden durch die am Drosselrückschlagventil montierte verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

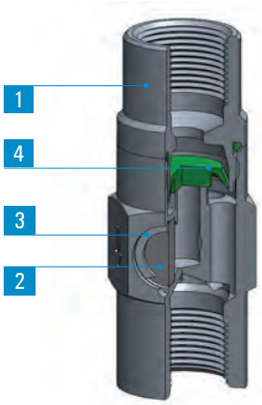
VX 22

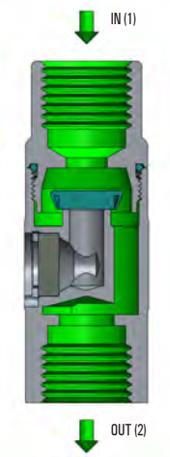
Valvola di scarico rapido in inox | Stainless steel quick exhaust valve | Vanne à échappement rapide en acier inox | Schnellentlüftungsventil aus Edelstahl

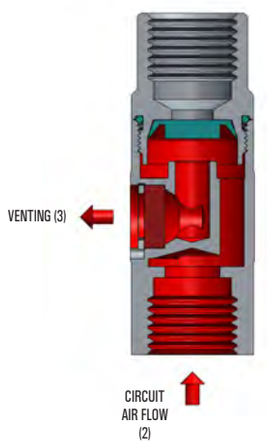
1	2	3	4
Corpo Body Corps Körper	Silenziatore Muffler Silencieux Schalldämpfer	Seeger Seeger Seeger Seeger	Guarnizioni Seals Joint d'étancheité Dichtung
Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404)	Acciaio Inox AISI 316 Stainless Steel AISI 316 Acier Inox AISI 316 Edelstahl AISI 316	Acciaio C75 Zincato C75 Steel zinc coated Acier C75 zingué C75 Stahl verzinkt	FPM FPM FPM FPM

-20°C ÷ 150°C

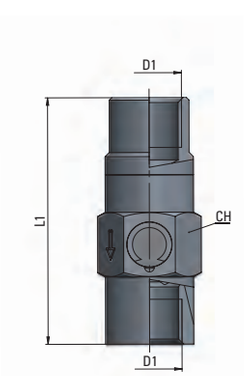
2 ÷ 10 bar



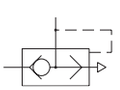




Portata a 6 bar Flow rate at 6 bar Débit à 6 bar Druckfluß (6 bar)	IN OUT 1→2	OUT VENT 2→3
1/4	1050 Nl/min	660 Nl/min
3/8	3000 Nl/min	1900 Nl/min
1/2	3420 Nl/min	2280 Nl/min



Type	D1	L1	CH	g
22 00 14	G1/4	49.5	18	51,5
22 00 38	G3/8	60.5	27	133,1
22 00 12	G1/2	68.5	35	257



Valvola in grado di scaricare rapidamente l'aria contenuta in un circuito in caso di mancanza d'alimentazione; se applicate ad un cilindro permettono di aumentarne la velocità.

This valve can easily vent the circuit in case of an air supply failure. If assembled on the cylinder port, it increases the cylinder speed.

Cette vanne permet de mettre à l'échappement un circuit en cas de défaut d'alimentation. Raccordée sur un vérin, elle permet d'augmenter la vitesse du débit d'échappement et de ce fait d'augmenter sa vitesse de fonctionnement.

Dieses Ventil kann bei Luftmangel die Anlage schnell entlüften. Wenn am Zylinderausgang montiert, wird dessen Geschwindigkeit vergrössert.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato alla valvola.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the valve.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
en fonction du raccord monté sur la vanne.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Die Schläuche werden durch die am Schnellentlüftungsventil montierte Verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

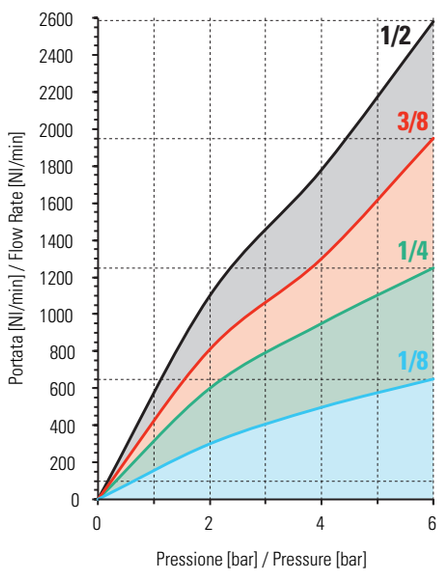
Valvola di non ritorno | Check valve | Clapet anti-retour | Rückschlagventil

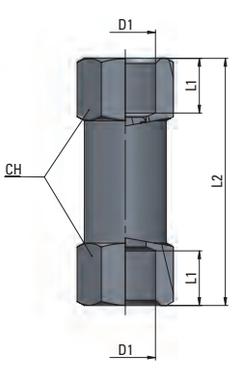
VX 23

1	2	3	4
Corpo Body Corps Körper	Otturatore Valve Clapet Ventil	Guarnizioni Seals Joint d'étancheité Dichtung	Molla Spring Ressort Feder
Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404)		FPM FPM FPM FPM	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302

-20°C ÷ 150°C | 2 ÷ 10 bar | 0,2 bar

P = 6 bar - Δp = 1 bar





Type	D1	L1	L2	CH	g ⚖
23 00 18	G1/8	8	39.7	13	26
23 00 14	G1/4	8.5	47.5	16	38,1
23 00 38	G3/8	10,5	51	21	76,1
23 00 12	G1/2	12,5	62	24	111,4

Queste valvole permettono il passaggio dell'aria in un unico senso (indicato sul corpo della valvola da una freccia) impedendolo in senso contrario.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato alla valvola.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

The flow is allowed only in one way (the arrow direction engraved on the body) and stopped in the reverse way.

DATA SHEET

Recommended tubings:
according to the fitting connected to the valve.

Application field:
pneumatic installations fed with filtered, lubricated air.

Il permet le passage du débit dans un seul sens (celui marqué sur le corps de la vanne par une flèche) tout en empechant son retour dans le sens contraire.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
en fonction du raccord monté sur la vanne.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié

Der Durchfluss wird nur einseitig erlaubt. Im Allgemeinen ist es die Richtung entsprechend dem auf dem Rückschlagventilskörper gekennzeichneten Pfeil. Die andere Seite bleibt abgesperrt.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Die Schläuche werden durch die am Schnellentlüftungsventil montierte Verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

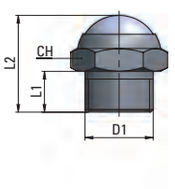
VX 11

Silenziatori | Air mufflers | Silencieux | Schalldämpfer

	Corpo Body Corps Körper	Silenziatore Muffler Silencieux Schalldämpfer		
VX11-FE	Acciaio Inox AISI 304 Stainless Steel AISI 304 Acier Inox AISI 304 Edelstahl AISI 304	Acciaio Inox AISI 304 Stainless Steel AISI 304 Acier Inox AISI 304 Edelstahl AISI 304	-20°C ÷ 150°C	0 ÷ 12 bar

VX 11-FE

Silenziatore con filo in acciaio inox | Air muffler with stainless steel wire | Silencieux avec fil acier inox | Schalldämpfer mit Edelstahldraht



NSF COMPONENT

Type	D1	L1	L2	CH	g ⚖
11 00 18-FE	G1/8	6	15	13	5,8
11 00 14-FE	G1/4	8	18	16	9,7
11 00 38-FE	G3/8	8	19	19	14,1
11 00 12-FE	G1/2	9	22	24	21,8

trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

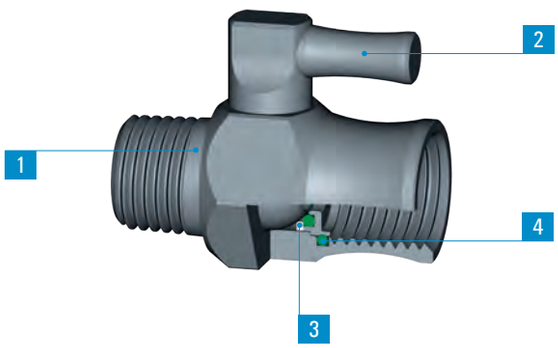
Valvola manuale 2 vie | 2 way manual valve | Vanne 2 voies, manuelle | 2 Wege Handventil

	1	2	3	4
VX24 - VX25	Corpo Body Corps Körper	Leva Handle Manette Griff	Rondella Gasket Rondelle Dichtring	Guarnizioni Seals Joint d'étancheité Dichtung
	Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404)		PTFE PTFE PTFE PTFE	FPM FPM FPM FPM

-20°C ÷ 150°C

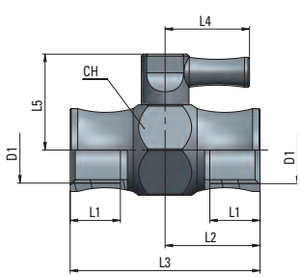
0 ÷ 10 bar

1/8	6 mm
1/4	6 mm
3/8	8 mm
1/2	10 mm



VX 24

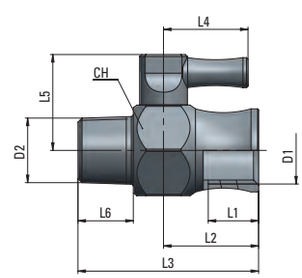
Valvola manuale 2 vie, F-F | 2 way manual valve, female | Vanne 2 voies, manuelle, femelle | 2 Wege Handventil mit Innengewinde



Type	D1	L1	L2	L3	L4	L5	CH	g
24 00 18	**G1/8**	8	19	37.8	17	19	18	54
24 00 14	**G1/4**	9	19	37.8	17	19	18	43,4
24 00 38	**G3/8**	10	24,5	39	24,5	26	22	67
24 00 12	**G1/2**	11	28,5	45.5	24,5	28	26	132,5

VX 25

Valvola manuale 2 vie, M-F | 2 way manual valve, male-female | Vanne 2 voies, manuelle, mâle-femelle | 2 Wege Handventil Einschraub-Aufschraub



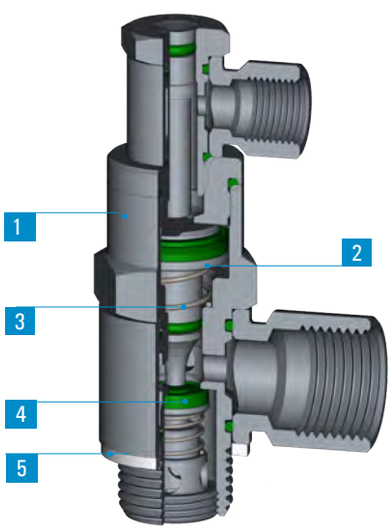
Type	D1	D2	L1	L2	L3	L4	L5	L6	CH	g
25 00 18	**G1/8**	**R1/8**	8	19	32.8	17	19	7,5	18	46,4
25 00 14	**G1/4**	**R1/4**	9	19	35.9	17	19	11	18	41,5
25 00 38	**G3/8**	**R3/8**	10	24,5	37.3	24,5	26	11,5	22	85,7
25 00 12	**G1/2**	**R1/2**	11	28,5	43.1	24,5	28	14	26	90,1

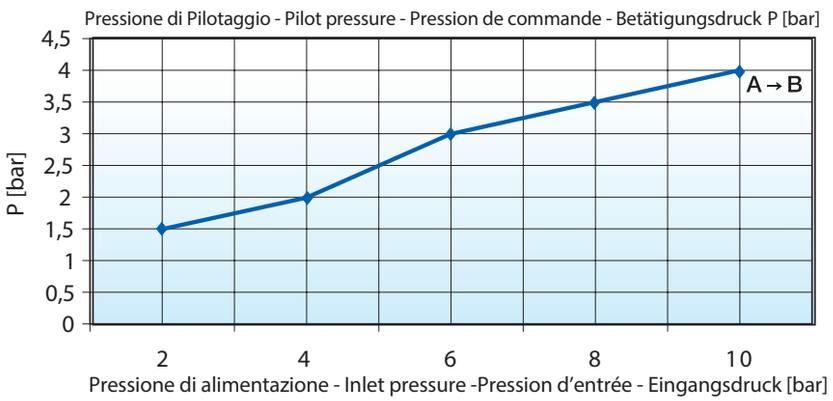
VX 45

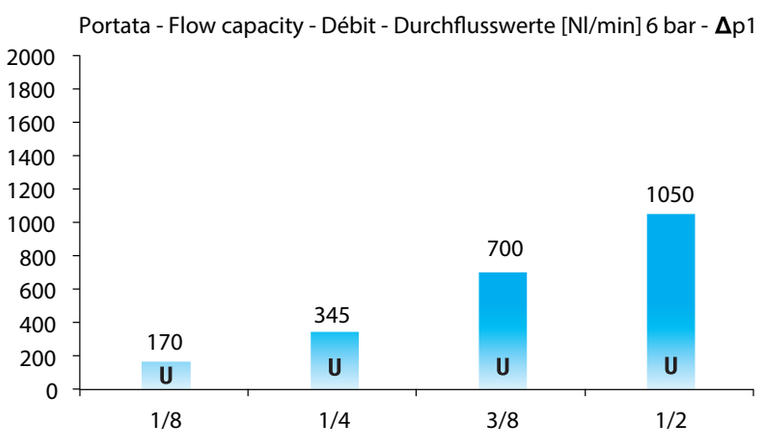
Valvola di blocco | Pilot operated check valve | Vanne d'arrêt | Sperrventil

1	2	3	4	5
Corpo Body Corps Körper	Pistone Piston Piston Kolben	Molla Spring Ressort Feder	Guarnizioni Seals Joint d'étancheité Dichtung	Rondelle Gasket Bague Plastique Kunststoffring
Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404)	Acciaio Inox AISI 304 Stainless Steel AISI 304 Acier Inox AISI 304 Edelstahl AISI 304	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	FPM conforme FDA FPM compliant with FDA FPM conforme à FDA FPM, FDA konform	PTFE PTFE PTFE PTFE

-20°C ÷ 150°C max 10 bar







Le valvole di blocco pilotate, se montate in coppia su un cilindro, in caso di una diminuzione improvvisa della pressione di comando, assicurano che ogni movimento del cilindro venga impedito.
Mediante il dispositivo di sblocco, è possibile ripristinare manualmente la corsa del pistone, cosa particolarmente utile in fase di messa a punto oppure in mancanza d'aria.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
Variabili in funzione del tipo di raccordo collegato allla valvola.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

Should a sudden pressure failure happen, if the stop valves are assembled in pairs on the cylinder, the stop valves make sure, that the cylinder piston rapidily stops. By operating the override device, it is possible to reset manually the piston stroke, which is particularly important during a set-up phase or in case of air shortage.

DATA SHEET

Recommended tubings:
according to the fitting connected to the valve.

Application field:
pneumatic installations fed with filtered, lubricated air.

La vanne d'arrêt pilotée permet, si montée en couple sur un vérin, de bloquer instantanément le déplacement de la tige du vérin en cas de chute brutale de la pression. Une commande manuelle permet de réalimenter le vérin. Cette fonctionnalité est particulièrement intéressante pendent la mise au point d'une machine ou en cas de problème sur l'alimentation d'air.

REINSEIGNEMENTS TECHNIQUES

Tube conseillé:
En fonction du raccord monté sur la vanne.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

Wenn zwei Sperrventile am Zylinderanschluss montiert werden, bei plötzlichem Druckabfall halten sie den Zylinderkolben schlagartig an. Mittels der Handbetätigung kann man den Kolbenhub noch laufen lassen, was bei einer Einrichtungsphase oder aber bei Luftausfall besonders vorteilhaft ist.

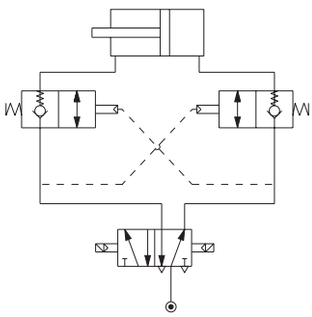
TECHNISCHE AUSKÜNFTE

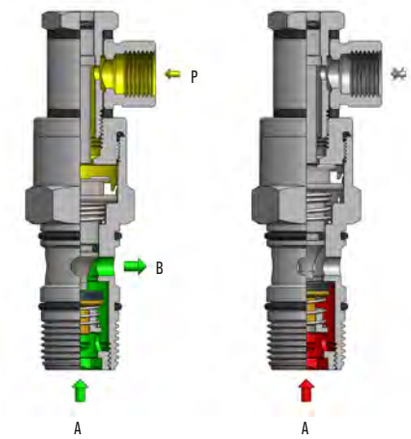
Empfohlene Schläuche:
Die Schläuche werden durch die am Schnellentlüftungsventil montierte Verschraubung bestimmt.

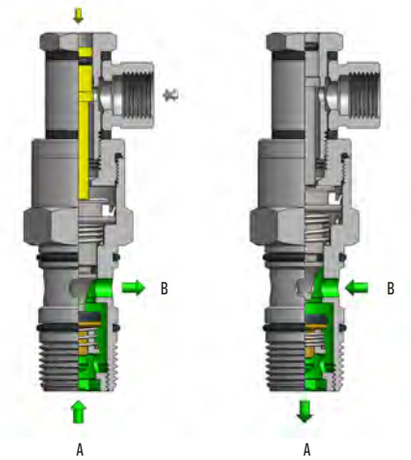
Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

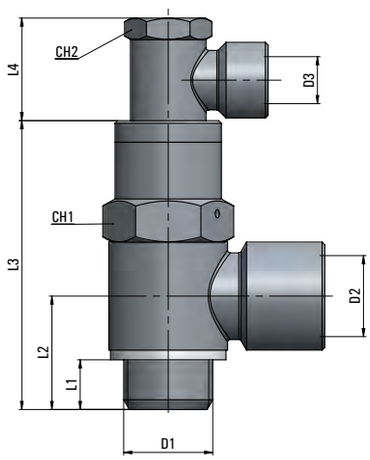
trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

/U = Valvola Unidirezionale - One Way - Unidirectionel - Einseitig



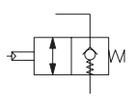






Type	D_1	D_2	D_3	L_1	L_2	L_3	L_4	CH_1	CH_2	g ⚖
45 18 18	**G 1/8**	G1/8	M5x0,8	6	15,5	42	20,5	13	8	-
45 14 14	**G 1/4**	G1/4	M5x0,8	8	18.5	46,5	20,5	17	8	-
45 38 38	**G 3/8**	G3/8	G1/8	9	21	53,5	19	21	14	-
45 12 12	**G 1/2**	G1/2	G1/8	10.5	24,5	61.5	19	25	14	-

Disponibile nelle versioni:
Available as:



.../U

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PVX LINE

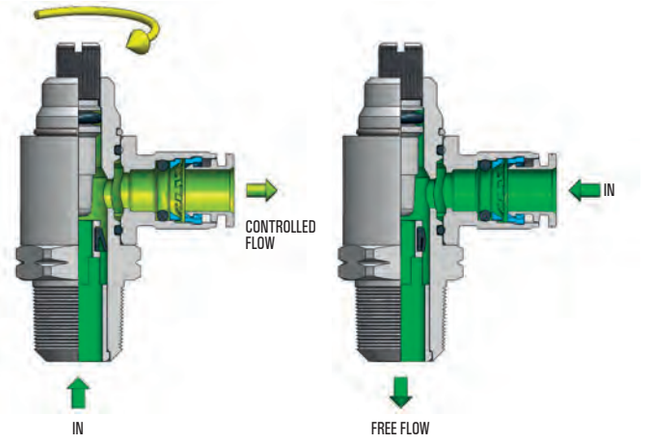
cmatic®
PNEUMATIC FITTINGS

Raccordi a Funzione in Acciaio Inox 316L Pollici/NPT
316L Stainless Steel Function Fittings, Inch/NPT
Raccords à fonction en acier Inox 316L, Pouce/NPT
Funktionsverschraubungen aus Edelstahl 1.4404, Zoll/NPT

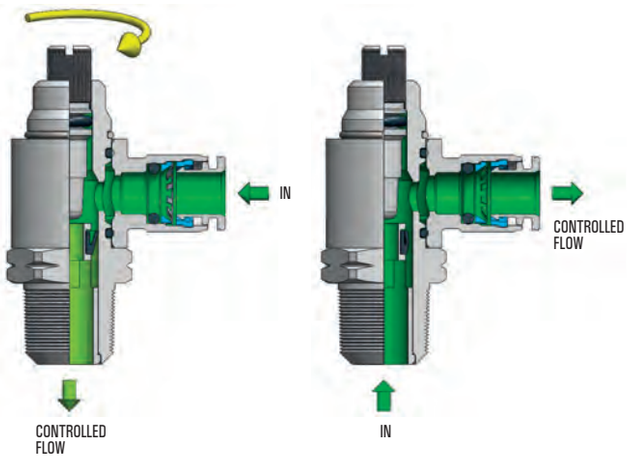
NSF COMPONENT

trigress armaturen ag | Oberneuhofstrasse 3 | 6340 Baar | 041 560 60 60 | verkauf@trigress-armaturen.ch | www.trigress-armaturen.ch

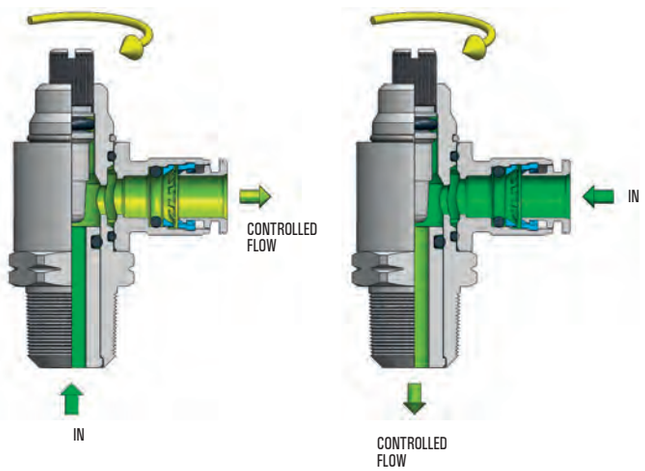
.../C = Regolazione del Flusso in Uscita
Meter out flow control
Réducteur de débit fonctionnant à échappement
Abluftdrosselung



.../V = Regolazione del Flusso in Ingresso
Meter in flow control
Réducteur de débit fonctionnant à l'admission
Zuluftdrosselung



.../B = Regolazione del Flusso in entrambe le direzioni
Bidirectional flow control
Réducteur de débit bidirectionel
Beidseitige Drosselung



Questi dispositivi offrono la possibilità di regolare la portata d'aria in un circuito pneumatico. In base al tipo di regolatore impiegato, la regolazione può avvenire in entrambi i sensi (Regolatore Bidirezionale), oppure in un unico senso (Regolatore Unidirezionale).
I Regolatori di Flusso Unidirezionali, risultano particolarmente adatti per la regolazione della velocità di cilindri pneumatici.

They can adjust the flow in a pneumatic circuit. Depending on the flow control used, the setting can be made both ways (Bidirectional Flow Control), or just one way (Unidirectional Flow Control). The Unidirectional Flow Control is particularly used to adjust the speed of pneumatic cylinders.

Leur fonction est d'assurer le réglage du débit dans un circuit pneumatique. Selon le réducteur employé, le réglage peut être effectué dans les deux sens (réducteur bidirectionel) ou dans un seul sens (réducteur unidirectionel). Le réducteur unidirectionel est très utilisé pour le réglage de la vitesse de sortie de tige du vérin pneumatique.

Das Drosselrückschlagventil regelt den Durchfluss in einer pneumatischen Anlage. Je nach dem Drosselventil, kann die Drosselung auf beiden Seiten (beidseitiges Drosselrückschlagventil) oder einfach auf einer Seite gemacht werden. (einseitiges Rückschlagventil). Besonders geeignet ist das einseitige Drosselrückschlagventil für die Regulierung der Zylindergeschwindigkeit.

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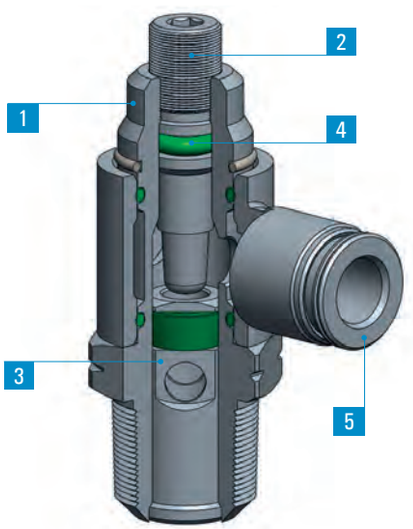
Regolatore con raccordo orientabile automatico | Flow control with swivelling push-in fitting | Réducteur de débit avec raccord automatique tournant | Drosselrückschlagventil mit schwenkbarer Steckverschraubung

PVX 18

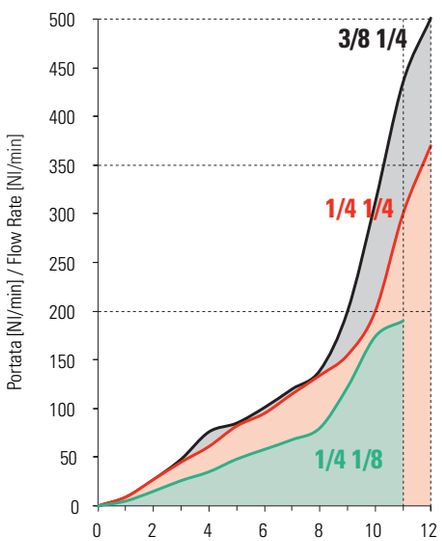
1	2	3	4	5
Corpo Body Corps Körper	Spillo Needle Epingle Nadel	Bussola Cartridge Cartouche Patrone	Guarnizioni Seals Joint d'étancheité Dichtung	Anello Banjo Ring Banjo Steckverschraubungen
Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404)			FPM FPM FPM FPM	Raccordo Automatico serie PX PX line push-in fittings Raccords instantanés série PX PX Steckverschraubungen

-20°C ÷ 150°C

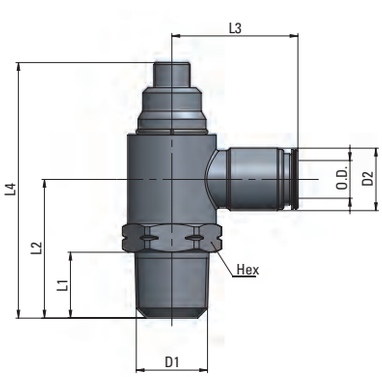
0 ÷ 10 bar



P = 6 bar - Δp = 1 bar



L'anello rimane orientabile anche dopo l'installazione del regolatore.
The banjo ring swivels also after flow control installation.
Les banjos peuvent être orientés après l'installation du réducteur.
Der Schwenkring kann nach der Montage des Drosselrückschlagventiles noch orientiert werden.



Type	Tube OD	D1 NPTF	D2	L1	L2	L3	L4 max	HEX	g
18 1/4 1/8	1/4	1/8	12	8,1	21,1	22,5	40,9	9/16	-
18 1/4 1/4	1/4	1/4	12	12,7	26,7	24	49,1	11/16	-
18 3/8 1/4	3/8	1/4	16	12,7	26,7	27	49,1	11/16	-

Disponibile nelle versioni:
Available as:

.../C = Meter Out

.../V = Meter In

.../B = Bidirectional

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
Tubo in PVDF, Tubo in PTFE.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
PVDF and PTFE tubings.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
Tube PVDF et Tube PTFE.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié.

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
PVDF, PTFEschlauch.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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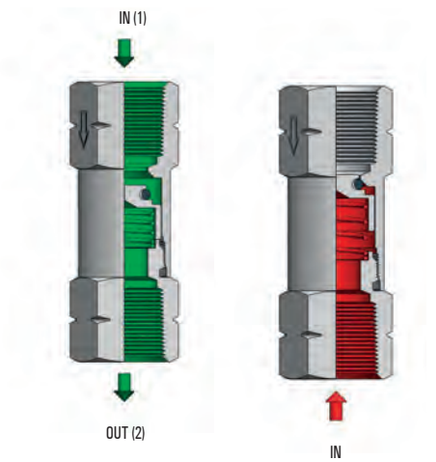
PVX 23

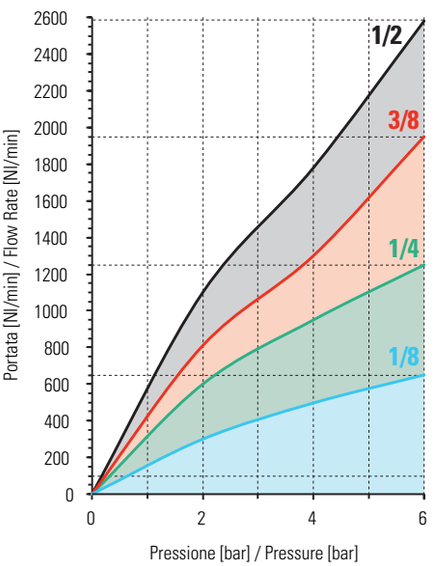
Valvola di non ritorno | Check valve | Clapet anti-retour | Rückschlagventil

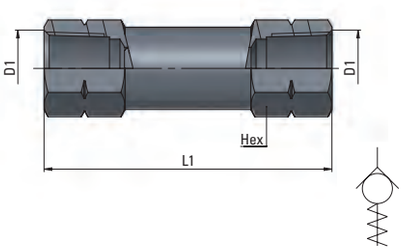
1	2	3	4
Corpo Body Corps Körper	Otturatore Valve Clapet Ventil	Guarnizioni Seals Joint d'étancheité Dichtung	Molla Spring Ressort Feder
Acciaio Inox AISI 316L (1.4404) Stainless Steel AISI 316L (1.4404) Acier Inox AISI 316L (1.4404) Edelstahl AISI 316L (1.4404)		FPM FPM FPM FPM	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302

-20°C ÷ 150°C | 2 ÷ 10 bar | 0,2 bar



P = 6 bar - Δp = 1 bar





Type	D1 NPTF	L1	HEX	g
23 00 1/8	1/8	42,7	13	-
23 00 1/4	1/4	55	16	-
23 00 3/8	3/8	57	20	-
23 00 1/2	1/2	65	24	111,4

Queste valvole permettono il passaggio dell'aria in un unico senso (indicato sul corpo della valvola da una freccia) impedendolo in senso contrario.

The flow is allowed only in one way (the arrow direction engraved on the body) and stopped in the reverse way.

Il permet le passage du débit dans un seul sens (celui marqué sur le corps de la vanne par une flèche) tout en empechant son retour dans le sens contraire.

Der Durchfluss wird nur einseitig erlaubt. Im Allgemeinen ist es die Richtung entsprechend dem auf dem Rückschlagventilskörper gekennzeichneten Pfeil. Die andere Seite bleibt abgesperrt.

SPECIFICHE TECNICHE

Tubi di collegamento consigliati:
variabili in funzione del tipo di raccordo collegato alla valvola.

Campi di applicazione:
impianti pneumatici alimentati con aria filtrata e lubrificata.

DATA SHEET

Recommended tubings:
according to the fitting connected to the valve.

Application field:
pneumatic installations fed with filtered, lubricated air.

REINSEIGNEMENTS TECHNIQUES

Tubes conseillés:
en fonction du raccord monté sur la vanne.

Domaines d'application:
circuits pneumatiques avec air filtré et lubrifié

TECHNISCHE AUSKÜNFTE

Empfohlene Schläuche:
Die Schläuche werden durch die am Schnellentlüftungsventil montierte Verschraubung bestimmt.

Anwendungsbereiche:
pneumatische Anlage mit gefilterter und geölter Druckluft.

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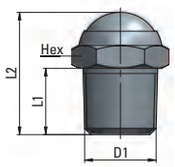
Silenziatori | Air mufflers | Silencieux | Schalldämpfer

PVX 11

	Corpo Body Corps Körper	Silenziatore Muffler Silencieux Schalldämpfer		
PVX11-FE	Acciaio Inox AISI 304 Stainless Steel AISI 304 Acier Inox AISI 304 Edelstahl AISI 304	Acciaio Inox AISI 304 Stainless Steel AISI 304 Acier Inox AISI 304 Edelstahl AISI 304	-20°C ÷ 150°C	0 ÷ 12 bar

PVX 11-FE

Silenziatore con filo in acciaio inox | Air muffler with stainless steel wire | Silencieux avec fil acier inox | Schalldämpfer mit Edelstahldraht



NSF COMPONENT

Type	D1 NPT	L1	L2	HEX	g
11 00 1/8-FE	**1/8**	7,5	16,5	13	6
11 00 1/4-FE	**1/4**	10	20,5	16	11,9
11 00 3/8-FE	**3/8**	11	22	19	20
11 00 12-FE	**1/2**	13	26	24	27

VT LINE

cmatic®
PNEUMATIC FITTINGS

Raccordi a Funzione per gli Impianti Frenanti
Function Fittings for Air Brake Systems
Raccords à Function pour Systèmes de Freinage Pneumatique
Funktionsverschraubungen für Druckluftbremssysteme

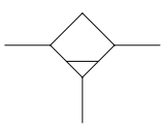
VT 90

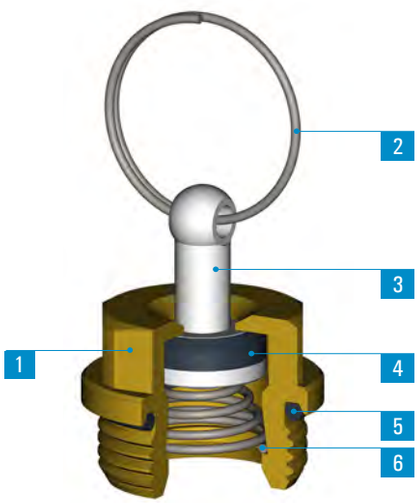
Valvola di drenaggio di condensa | Drain valve | Valve de purge | Entwässerungsventil

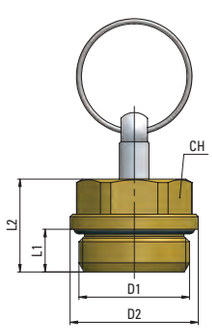
1	2	3	4	5	6
Corpo Body Corps Körper	Anello piatto Flat ring Anneau plat Flacher Ring	Pistone Piston Piston Kolben	Tampone Flat seal Joint plat flache Dichtung	Guarnizioni Seals Joint d'étancheité Dichtung	Molla Spring Ressort Feder
Ottone UNI EN 12164 CW614N Brass UNI EN 12164 CW614N Laiton UNI EN 12164 CW614N Messing UNI EN 12164 CW614N	AISI302 AISI302 AISI302 AISI302	PA6.6 PA6.6 PA6.6 PA6.6	NBR (bassa temperatura) NBR (low temperature) NBR (basse température) NBR (niedrige Temperatur)	NBR (bassa temperatura) NBR (low temperature) NBR (basse température) NBR (niedrige Temperatur)	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302

-50°C ÷ 100°C

0 – 16 bar







	Type	D1	D2	L1	L2	CH	g
new	**90 00 M22x1,5**	**M22x1,5**	25,5	8,5	18,5	21	36,8

SPECIFICHE TECNICHE

Campi di applicazione:
Sistemi frenanti dei veicoli commerciali e industriali.

Coppie di Serraggio
Per i dati relativi alle *Coppie di Serraggio* della serie VT, fare riferimento alla tabella rappresentata a pagina 74.

Certificazione
Il VT90 ha ottenuto la certificazione a norma DIN 74324.

DATA SHEET

Application fields:
Air Brake Systems on Commercial and Industrial Vehicles.

Tightening Torque Forces
As for VT *Tightening Torque Forces* please refer to the data at page 74.

Certification
VT90 is certified according to DIN 74324.

REINSEIGNEMENTS TECHNIQUES

Domaines d'emploi:
Systèmes de freinage pour véhicules industriels et commerciaux.

Couples de Serrage
Pour les *Couples de Serrage* de la série VT, veuillez Vous référer aux données de la page 74.

Certifications
Le VT90 est certifiés selon la norme DIN 74324.

TECHNISCHE AUSKÜNFTE

Anwendungsbereiche:
Bremsanlagen für Industrie und Nutzfahrzeuge.

Drehmomente
Bezüglich der VT-*Drehmomente,* bitte sich auf die Daten auf Seite 74 beziehen.

Zertifizierung
VT90 entspricht den Normen nach DIN 74324.

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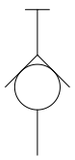
VT 91

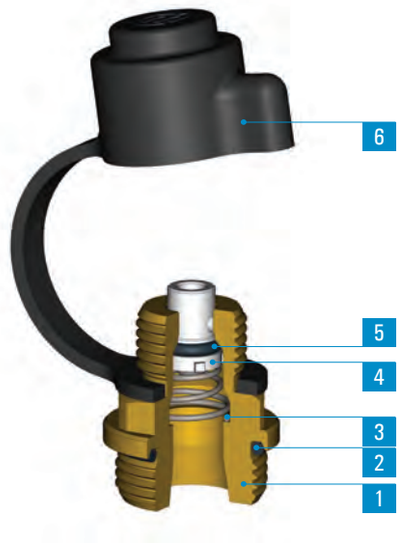
Pressure test point | Pressure test point | Prise de pression | Prüfanschluss

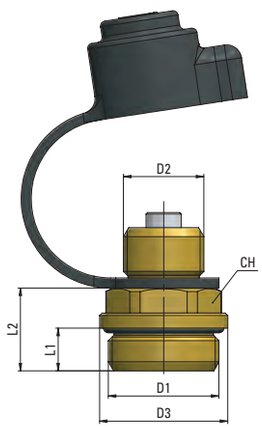
1	2/5	3	4	6
Corpo Body Corps Körper	Guarnizioni Seals Joint d'étancheité Dichtung	Molla Spring Ressort Feder	Pistone Piston Piston Kolben	Tappo Protezione Protection Cap Capuchon de protection Schutzkappe
Ottone UNI EN 12164 CW614N Brass UNI EN 12164 CW614N Laiton UNI EN 12164 CW614N Messing UNI EN 12164 CW614N	NBR (bassa temperatura) NBR (low temperature) NBR (basse température) NBR (niedrige Temperatur)	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	PA6.6 PA6.6 PA6.6 PA6.6	NBR (bassa temperatura) NBR (low temperature) NBR (basse température) NBR (niedrige Temperatur)

-50°C ÷ 100°C

0 – 16 bar







	Type	D1	D2	D3	L1	L2	CH	g
new	**91 00 M16x1,5**	**M16x1,5**	**M16x1,5**	20	8,5	16,5	17	32,9
new	**91 00 M22x1,5**	**M22x1,5**	**M16x1,5**	25,5	8,5	16,5	21	55

SPECIFICHE TECNICHE

Campi di applicazione:
Sistemi frenanti dei veicoli commerciali e industriali.

Coppie di Serraggio
Per i dati relativi alle *Coppie di Serraggio* della serie VT, fare riferimento alla tabella rappresentata a pagina 74.

Certificazione
Il VT91 ha ottenuto la certificazione a norma ISO 3583.

DATA SHEET

Application fields:
Air Brake Systems on Commercial and Industrial Vehicles.

Tightening Torque Forces
As for VT *Tightening Torque Forces* please refer to the data at page 74.

Certification
VT91 is certified according to ISO 3583.

REINSEIGNEMENTS TECHNIQUES

Domaines d'emploi:
Systèmes de freinage pour véhicules industriels et commerciaux.

Couples de Serrage
Pour les *Couples de Serrage* de la série VT, veuillez Vous référer aux données de la page 74.

Certifications
Le VT91 est certifiés selon la norme ISO 3583.

TECHNISCHE AUSKÜNFTE

Anwendungsbereiche:
Bremsanlagen für Industrie und Nutzfahrzeuge.

Drehmomente
Bezüglich der VT-*Drehmomente,* bitte sich auf die Daten auf Seite 74 beziehen.

Zertifizierung
VT91 entspricht den Normen nach ISO 3583.

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TOOLS

cmatic®
PNEUMATIC FITTINGS

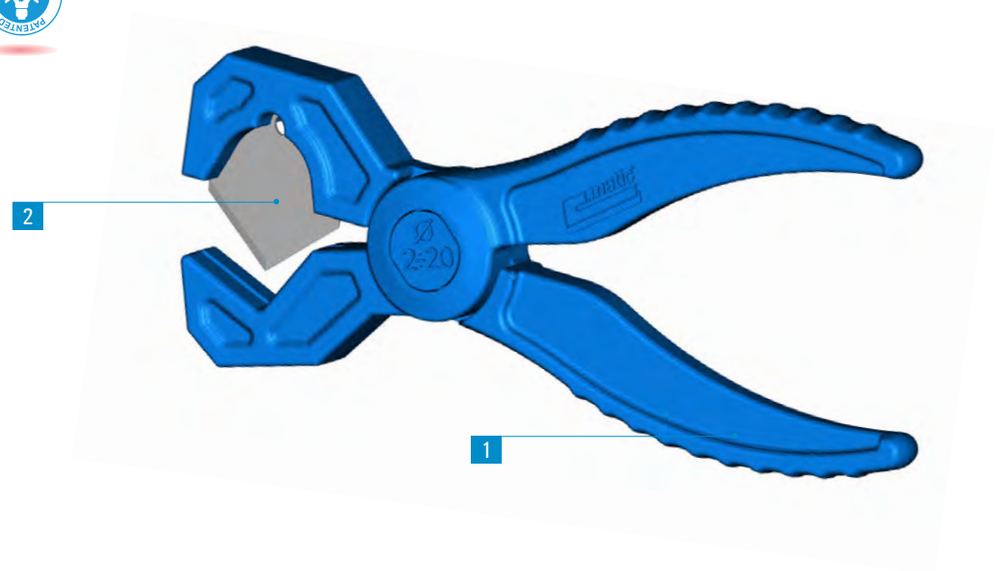
TCUT

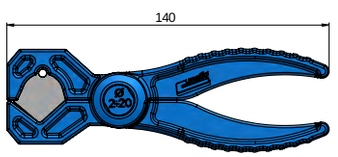
Pinza taglia tubo | Hose cutter | Coupe tube | Schlauchschneider

1	2	
Corpo Body Corps Körper	Lama Blade Lame Ersatzklingen	
PA66 - 50% FV	Carbon Steel C125	

-20°C ÷ 50°C

Ø2 ÷ Ø20 mm





Type	Øe Tube	g
TCUT0001	da ø 2 a ø 20	43,8

Lame di Ricambio per Pinze | Spare Blades | Lame | Ersatzklingen

Type	Øe Tube	g
TCUT0101	da ø 2 a ø 20	2,1

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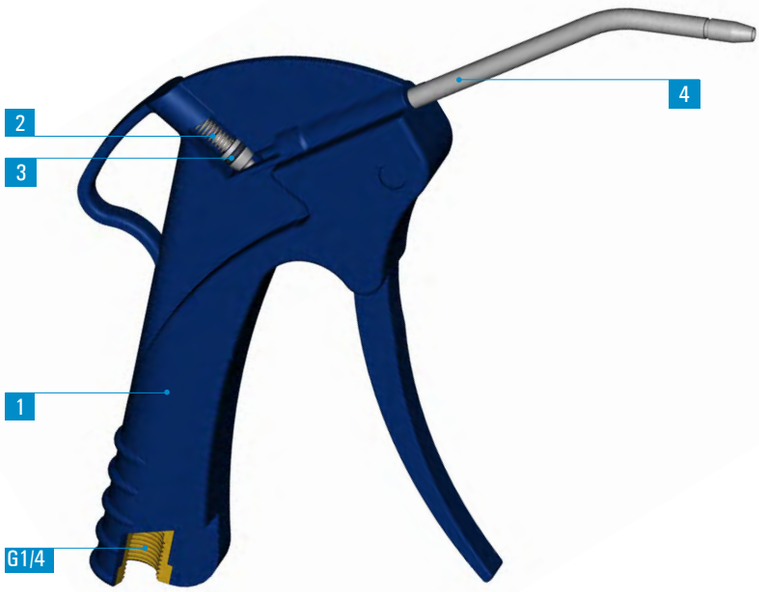
TGUN

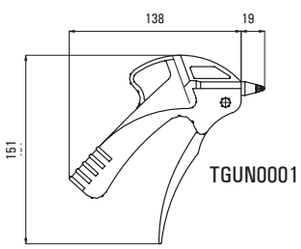
1	2	3	4
Corpo Body Corps Körper	Molla Spring Ressort Feder	Guarnizioni Seals Joint d'étanchéité Dichtung	Tubetto Tube Tube Rohr
POM POM POM POM	Acciaio Inox AISI 302 Stainless Steel AISI 302 Acier Inox AISI 302 Edelstahl AISI 302	NBR NBR NBR NBR	Acciaio Inox AISI 304 Stainless Steel AISI 304 Acier Inox AISI 304 Edelstahl AISI 304

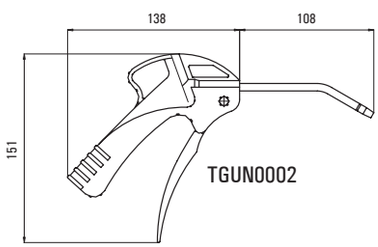
-10°C ÷ 70°C

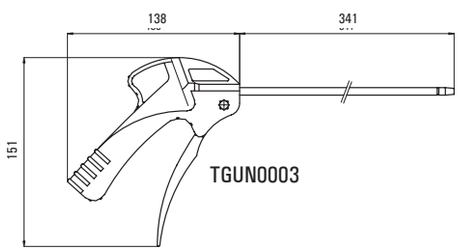
Max 6 bar

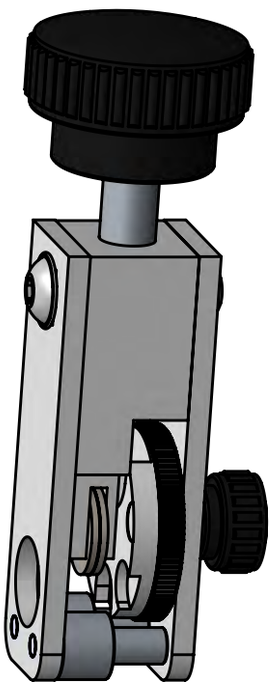


Type	dB (6 bar)	g
TGUN0001	75,1	91,5
TGUN0002	79,5	114,5
TGUN0003	79,2	146

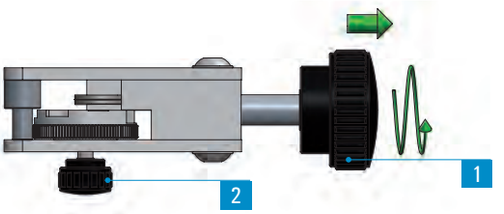




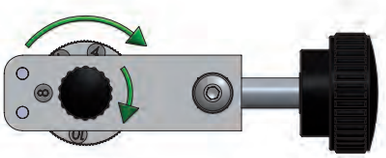




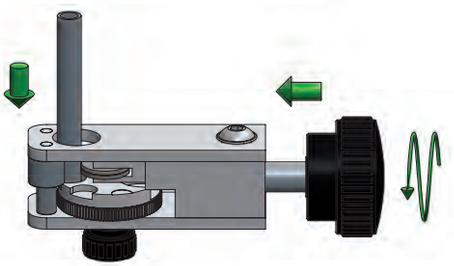
1 Fase / Step / Phase / Schritt



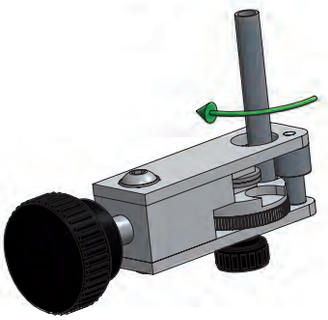
2 Fase / Step / Phase / Schritt



3 Fase / Step / Phase / Schritt



4 Fase / Step / Phase / Schritt



ISTRUZIONI PER L'USO

Fase 1. Fare arretrare completamente la lama dell'incisore svitando il pomolo (1).
Fase 2. Svitare il pomolo (2) e ruotare il disco numerato per selezionare la misura del tubo da incidere. Effettuata la selezione avvitare fino al serraggio il pomolo (2) bloccando così la misura.
Fase 3. Inserire il tubo da incidere all'interno dell'apposito foro appoggiandolo sui due rulli interni e spingendolo in battuta sul fondo; avvitare il pomolo (1) fino a mandare la lama contro il tubo serrando adeguatamente il pomolo (1) al fine di incidere la superficie del tubo.
Fase 4. Tenendo fisso il tubo da un lato far ruotare lo scanalatore intorno al tubo fino all'ottenimento dell'incisione desiderata.

INSTRUCTIONS FOR USE

Step 1. Pull back the tool blade by loosening the knob (1).
Step 2. Untighten the knob (2) and turn the numbered wheel to select the desired tube size. Once the tube size is selected, firmly tighten the knob (2) until the desired tubing size is blocked.
Step 3. Insert the tubing into the hole, all the way down through the internal wheels, until it bottoms; tighten the knob (1) until the blade is against the tubing and keep turning the knob firmly in order to groove the surface of the tubing.
Step 4. Hold the tubing tight and make the tool turn all around the tubing as many times as the desired groove on the tubing is achieved.

RENSEIGNEMENTS POUR L'EMPLOI

Phase 1. Faire réculer la lame de l'outil tout en dévissant complétement le bouton tournant (1).
Phase 2. Dévisser le bouton tournant (2) et tourner le disc numéroté pour sélectionner la taille du tuyau à rainer. Une fois sélectionner la taille du tuyau, visser jusqu'au serrage le bouton tournant (2) pour bloquer la taille.
Phase 3. Insérer le tuyau dans le trou jusqu'au fond ; visser le bouton tournant (1) afin que la lame soit contre le tuyau et continuer à serrer pour rainer la surface du tuyau.
Phase 4. Tenir le tube et faire tourner l'outil tout autour du tuyau jusqu' à l'on obient la rainure du tuyay désirée.

ANWEISUNGEN ZUR ANWENDUNG

Schritt 1. die Klinge des Rillgerätes zurückziehen, beim kompletten Lösen des Drehknopfes (1).
Schritt 2. den Drehknopf (2) lösen und das nummerierte Rad drehen, um den erwünschten Rohrdurchmesser zu wählen. Den Drehknopf (2) bis zum Festziehen drehen, so dass der erwünschte Durchmesser blockiert wird.
Schritt 3. Das Rohr in die Bohrung bis zum Anschlag einstecken; den Drehknopf (1) drehen, bis die Klinge auf das Rohr ist und dann weiterdrehen, bis die Oberfläche des Rohres gerillt wird.
Schritt 4. Das Rohr festhalten, und das Werkzeug um das Rohr herum drehen, bis die Rilletiefe erzeugt wird.

TOOL

Drilling tool | Drilling tool | Outil à percer | Bohrenwerkzeug

Type	Line	Ø Tubo	g ⚖
TOOL0001	MA-MB-PN	4 - 5/32	-
TOOL0002	MA-MB	6	110
TOOL0003	MA-MB-PN	8 - 5/16	114,7
TOOL0004	MA-MB	10	133,7
TOOL0005	PN	1/4	104,5
TOOL0006	PN	3/8	121
TOOL0011	PT	5/32	-
TOOL0012	PT	1/4	-
TOOL0013	PT	3/8	-

TOOL

Assembly tool | Assembly tool | Outil pour le montage | Einpresswerkzeug

Type	Ø Tubo	g ⚖
TOOL007	4 - 5/32	52,3
TOOL008	6 - 1/4	68,7
TOOL009	8 - 5/16	81,2
TOOL010	10 - 3/8	93,5

TREL

Utensile rilascio tubo | Tube release tool | Outil dé branchement tube | Werkzeug zum Schlauchlösen

Type	Ø Tubo	g ⚖
TREL0001	6 ÷ 12	2,4
TREL0002	15 ÷ 18	4,7

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TUBINGS

cmatic®
PNEUMATIC FITTINGS

POLIAMMIDE 12 (PA12)

TUBI FLESSIBILI
Temperature di Impiego: da -40°C a +100°C
Durezza: 64 Shore D
Il tubo è fornito in rotoli da 100 mt.
Prodotto con materie prime atte a soddisfare le normative DIN 73378/74323*
Colori disponibili:
Neutro, Blu, Giallo, Rosso, Verde, Nero
*Solo in Nero

POLYAMIDE 12 (PA12)

FLEXIBLE TUBINGS
Working temperature: -40°C to +100°C.
Hose Hardness: 64 Shore D
Rolls: 100 mt.
Produced with raw materials designed to meet DIN 73378/74324 standards*
Colours available: Neutral, Blue, Yellow, Red, Green, Black
*Only in Black

POLYAMIDE 12 (PA12)

TUBES FLEXIBLES
Température d' exercice: -40°C jusqu' à +100°C.
Dureté: 64 Shore D
Rouleaux: 100 mètres.
Produit avec des matières premières conformes aux normes DIN 73378/74324*
Couleurs disponibles: neutre, bleu, jaune, rouge, vert, noir.
* Disponible seulement en Noir

POLYAMID 12 (PA12)

FLEXIBLE SCHLÄUCHE
Temperaturbereich -40°C bis +100°C.
Schlauchhärte: 64 Shore D
Rollenlänge: 100 mt.
Hergestellt mit DIN-konformen Rohstoffen 73378/74324 Normen*
Farben: Neutral, Blau, Gelb, Rot, Grün, Schwarz
* nur in Schwarz

Variazione % della Pressione in funzione della temperatura
Pressure variation (%) in relation with temperature change
Variation (%) de la pression en fonction du changement de la température:
Druckschwankungen (%) im Verhältnis mit Temperaturabänderungen

20°C	100%
40°C	85%
60°C	60%
80°C	40%
100°C	35%

Dimensioni-Sizes Diamètre-Durchmesser Ø e (mm)	Ø i (mm)	Peso Weight Poids Gewicht (gr/mt)	Raggio di curvatura Bend radius Rayon de Courbure Biegeradius (mm)	Pressione a 20°C -Pressure at 20°C Pression à 20°C- Druck bei 20°C Esercizio-Working (bar) Travail-Druckbereich (bar)	Scoppio-Bursting point (bar) Point d'éclatement-Berstpunkt (bar)
4	2	9,5	20	56	167
4	2,5	7,7	25	38	115
5	3	13,2	25	33	100
6	4	15,9	35	33	100
8	6	22,2	40	24	71
10	8	28,5	60	19	56
12	10	34,9	85	15	45

POLIURETANO ELASTOLLAN® C98(PU)

TUBI FLESSIBILI
Caratteristica principale del tubo in poliuretano è l'estrema flessibilità che si traduce nella possibilità di realizzare raggi di curvatura molto stretti. Sensibili all'idrolisi e ai raggi UV, i tubi in PU a base estere vengono usati principalmente per il passaggio dell'aria compressa.
Temperature di Impiego: da -40°C a +60°C.
Durezza: 49-55 Shore D
Il tubo è fornito in rotoli da 100 mt.
Colori disponibili: Neutro, Giallo, Verde, Rosso, Nero, Blu

POLYURETHANE ELASTOLLAN® C98(PU)

FLEXIBLE TUBINGS
Polyurethane Elastollan C98 major feature is the high flexibility that allows for very narrow hose radius if needed by the application. All ester base PU hoses are sensitive to hydrolysis and UV rays hence primarily recommended for air compressed applications.
Working temperature: -40°C to +60°C.
Hose Hardness: 49-55 Shore D
Rolls: 100 mt.
Colours available: Neutral, Yellow, Red, Green, Black, Blue.

POLYURÉTHANE ELASTOLLAN® C98(PU)

TUBES FLEXIBLES
Offrant une extrême flexibilité, ce tube permet de réaliser des rayons de courbure très étroits. Sensible à l'hydrolyse et au rayon UV, le tube en PU à base ésthère est employé surtout dans les domaine de l'air comprimé. Température de travail: -40°C jusqu'à +60°C
Dureté: 49-55 Shore D
Rouleaux: 100 mètres.
Couleurs disponibles: Neutre, bleu, jaune, rouge, vert, noir

POLYURETHAN ELASTOLLAN® C98(PU)

FLEXIBLE SCHLÄUCHE
Die Haupteigenschaft von Polyurethan ist die höchste Schlauchflexibilität, die sehr schmale Biegeradius ermöglicht. Zur Hydrolyse und UV Strahlen empfindlich, wird PU Esterbaseschlauch hauptsächlich für Anwendung mit Druckluft empfohlen.
Temperaturbereich: -40°C bis +60°C.
Schlauchhärte: 49-55 Shore D
Rollenlänge: 100 mt.
Farben: Neutral, Blau, Gelb, Rot, Grün, Schwarz.

Variazione % della Pressione in funzione della temperatura
Pressure variation (%) in relation with temperature change
Variation (%) de la pression en fonction du changement de la température:
Druckschwankungen (%) im Verhältnis mit Temperaturabänderungen

20°C	100%
30°C	83%
40°C	72%
50°C	64%
60°C	47%

Dimensioni-Sizes Diamètre-Durchmesser Ø e (mm)	Ø i (mm)	Peso Weight Poids Gewicht (gr/mt)	Raggio di curvatura Bend radius Rayon de Courbure Biegeradius (mm)	Pressione a 20°C -Pressure at 20°C Pression à 20°C- Druck bei 20°C Esercizio-Working (bar) Travail-Druckbereich (bar)	Scoppio-Bursting point (bar) Point d'éclatement-Berstpunkt (bar)
4	2	11,7	20	22	67
4	2,5	9,5	20	15	46
5	3	15,6	25	17	50
6	4	19,5	30	13	40
8	6	30	40	10	29
10	8	40	50	7	22
12	9	61,3	50	10	29

POLIAMMIDE 6 (PA6)

TUBI FLESSIBILI
Temperature di Impiego: da -10°C a +80°C.
Durezza: 85 Shore D
Il tubo è fornito in rotoli da 100 mt.
Colori disponibili: Neutro, Giallo, Verde, Rosso, Nero, Blu

POLYAMIDE 6 (PA 6)

FLEXIBLE TUBINGS
Working temperature: -10°C to +80°C.
Hose Hardness: 85 Shore D
Rolls: 100 mt.
Colours available: Neutral, Yellow, Green, Red, Black, Blue

POLYAMIDE 6 (PA 6)

TUBES FLEXIBLES
Température de travail: -10°C jusqu' à +80°C.
Dureté: 85 Shore D
Rouleaux: 100 mètres.
Couleurs disponibles: Neutre, Jaune, Vert, Rouge Noir, Bleu

POLYAMID 6 (PA6)

FLEXIBLE SCHLÄUCHE
Temperaturbereich: -10°C bis +80°C.
Schlauchhärte: 85 Shore D
Rollenlänge: 100 mt.
Farben: Neutral, Blau, Gelb, Rot, Grün, Schwarz

Variazione % della Pressione in funzione della temperatura
Pressure variation (%) in relation with temperature change
Variation (%) de la pression en fonction du changement de la température:
Druckschwankungen (%) im Verhältnis mit Temperaturabänderungen

20°C	100%
30°C	83%
40°C	72%
50°C	64%
60°C	57%
70°C	52%
80°C	47%

Dimensioni-Sizes Diamètre-Durchmesser Ø e (mm)	Ø i (mm)	Peso Weight Poids Gewicht (gr/mt)	Raggio di curvatura Bend radius Rayon de Courbure Biegeradius (mm)	Pressione a 20°C -Pressure at 20°C Pression à 20°C- Druck bei 20°C Esercizio-Working (bar) Travail-Druckbereich (bar)	Scoppio-Bursting point (bar) Point d'éclatement-Berstpunkt (bar)
4	2	10,6	25	56	167
4	2,5	8,7	30	38	115
5	3	14,2	30	42	125
6	4	17,7	45	33	100
8	6	24,8	65	24	71
10	8	31,9	80	19	56
12	10	39	100	15	45
14	12	46,1	100	13	38
15	12,5	61	140	15	45

POLIAMMIDE 6.6 (PA6.6)

TUBI FLESSIBILI
Particolarmente idoneo per il passaggio di olio e grasso
Temperature di Impiego: da 0°C a +100°C.
Durezza: 96 Shore D
Il tubo è fornito in rotoli da 100 mt.
Colori disponibili: Neutro

POLYAMIDE 6.6 (PA6.6)

FLEXIBLE TUBINGS
This tube is suitable for oil and grease applications.
Working temperature: 0°C to +100°C.
Hose Hardness: 96 Shore D
Rolls: 100 mt.
Colour Available: Neutral

POLYAMIDE 6.6 (PA6.6)

TUBES FLEXIBLES
Le Polyamide 6.6 est un tube conseillé pour le passage de l'huile et du gras.
Température de travail: 0°C jusqu'à +100°C.
Dureté: 96 Shore D
Rouleaux: 100 mètres.
Couleurs disponibles: Neutre

POLYAMID 6.6 (PA6.6)

FLEXIBLE SCHLÄUCHE
Dieser Schlauch ist besonders für Anwendungen mit Oel und Fett geeignet.
Temperaturbereich: 0°C bis +100°C.
Schlauchhärte: 96 Shore D
Rollenlänge: 100 mt.
Farben: Neutral

Variazione % della Pressione in funzione della temperatura Pressure variation (%) in relation with temperature change Variation (%) de la pression en fonction du changement de la température: Druckschwankungen (%) im Verhältnis mit Temperaturabänderungen		Dimensioni-Sizes Diamètre-Durchmesser Ø e (mm)	Ø i (mm)	Peso (gr/mt) Weight (gr/mt) Poids (gr/mt) Gewicht (gr/mt)	Raggio di curvatura (mm) Bend radius (mm) Rayon de Courbure (mm) Biegeradius (mm)	Pressione a 20°C -Pressure at 20°C Pression à 20°C- Druck bei 20°C Esercizio-Working (bar) Travail-Druckbereich (bar)	Scoppio-Bursting point (bar) Point d'éclatement-Berstpunkt (bar)
20°C	100%	4	1,5	12,5	35	136	409
40°C	85%	6	3	24	45	100	300
60°C	60%	8	5	34,6	45	69	207
80°C	40%						
100°C	30%						

POLIETILENE (LDPE)

TUBI FLESSIBILI
Temperature di Impiego: da -10°C a +60°C.
Durezza: 46 Shore D
Il tubo è fornito in rotoli da 100 mt.
Colori disponibili: neutro, rosso, giallo, blu, verde, nero e azzurro

LD POLYETHYLENE (LDPE)

FLEXIBLE TUBINGS
Working temperature -10°C a +60°C.
Hose Hardness: 46 Shore D
Rolls: 100 mt.
Colours available: Neutral, red, yellow, blue, green, black, light blue

POLYÉTHYLÉNE (LDPE)

TUBES FLEXIBLES
Température de travail: -10°C jusqu' à +60°C.
Dureté: 46 Shore D
Rouleaux: 100 mètres.
Couleurs disponibles: rouge, jaune, bleu, vert, noir et bleu clair

POLYETHYLEN (LDPE)

FLEXIBLE SCHLÄUCHE
Temperaturbereich: -10°C bis +60°C.
Schlauchhärte: 46 Shore D
Rollenlänge: 100 mt.
Farben: Neutral, Rot, Gelb, Blau, Grün, Schwarz und Blau

Variazione % della Pressione in funzione della temperatura Pressure variation (%) in relation with temperature change Variation (%) de la pression en fonction du changement de la température: Druckschwankungen (%) im Verhältnis mit Temperaturabänderungen		Dimensioni-Sizes Diamètre-Durchmesser Ø e (mm)	Ø i (mm)	Peso (gr/mt) Weight (gr/mt) Poids (gr/mt) Gewicht (gr/mt)	Raggio di curvatura (mm) Bend radius (mm) Rayon de Courbure (mm) Biegeradius (mm)	Pressione a 20°C -Pressure at 20°C Pression à 20°C- Druck bei 20°C Esercizio-Working (bar) Travail-Druckbereich (bar)	Scoppio-Bursting point (bar) Point d'éclatement-Berstpunkt (bar)
20°C	100%	4	2	8,69	18	21	63
30°C	83%	4	2,5	7,06	20	15	44
40°C	72%	5	3	11,58	25	16	48
50°C	64%	6	4	14,48	30	13	38
60°C	57%	8	6	20,27	40	9	27
		10	7	36,91	60	11	34
		12	9	45,60	65	9	27
		12	10	31,85	80	6	17
		14	11	54,28	80	8	23
		15	12,5	49,76	100	6	17

P.T.F.E.

TUBI FLESSIBILI
È utilizzato quando l'alta temperatura è abbinata ad ambienti di lavoro aggressivi e critici, ha un'ottima resistenza ai prodotti chimici, ottime proprietà dielettriche e rimane inalterato a contatto con ossigeno, ozono e raggi ultra-violetti.
Temperature di impiego: -60°C to +260°C.
Durezza: 60 Shore D
Resistenza alla fiamma: UL 94 V0
Il tubo è fornito in rotoli da 50 mt.
Colori disponibili: Neutro

P.T.F.E.

FLEXIBLE TUBINGS
P.T.F.E tube is recommended with high temperatures and critical,aggressive environments.
It offers great resistance to chemicals and it has high dielectric properties. P.T.F.E is subject to no variations in contact with oxygen, ozone, and Ultraviolet rays
Working temperature: -60°C to +260°C.
Hose Hardness: 60 Shore D
Flame resistance: UL 94 V0
Rolls: 50 mt.
Colour available: Neutral

P.T.F.E.

TUBES FLEXIBLES
La caractéristique de ce tube est l'haute résistance à la température ainsi que aux agents chimiques.
Il offre des propriétés diélectriques optimales et il ne change pas à contact avec l'oxygène, l'ozone et les rayons ultraviolets.
Température de travail: -60°C jusqu'à +260°C.
Dureté: 60 Shore D
Résistance à la flamme: UL 94 V0
Rouleaux: 50 mètres.
Couleur disponible: Neutre

P.T.F.E.

FLEXIBLE SCHLÄUCHE
PTFE Schlauch ist temperaturfest und gegen nahezu alle Chemikalien beständig daher für aggressive Umgebungen und hohe Temperaturen besonders geeignet. Dieser Schlauch bietet sehr gute dielektrische Eigenschaften und bleibt in Berührung mit Sauerstoff, Ozon und Ultraviolettstrahlen unverändert.
Temperaturbereich: -60°C bis +260°C.
Schlauchhärte: 60 Shore D
Flammwidrigkeit: UL 94 V0
Rollenlänge: 50 mt.
Farben: Neutral

Dimensioni Sizes Diamètre Durchmesser	Ø i (mm)	Tolleranza Tolerance Tolérance Toleranz	Parete Wall Cloison Wanddicke	(mm) (mm) (mm) (mm)	Tolleranza Tolerance Tolérance Toleranz	Ø e (mm)	Raggio di curvatura (mm) Bend radius (mm) Rayon de Courbure (mm) Biegeradius (mm)	Pressione a 20°C -Pressure at 20°C Pression à 20°C- Druck bei 20°C Esercizio-Working (bar) Travail-Druckbereich (bar)	Scoppio-Bursting point (bar) Point d'éclatement-Berstpunkt (bar)	Peso (gr/mt) Weight (gr/mt) Poids (gr/mt) Gewicht (gr/mt)
4x2	2	±0,10	1		±0,20	4	20	27	81	22
6x4	4	±0,15	1		±0,20	6	35	18	54	37
8x6	6	±0,20	1		±0,20	8	40	14	42	51
10x8	8	±0,30	1		±0,20	10	60	12	36	66
12x10	10	±0,30	1		±0,20	12	85	10	30	80

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POLIAMMIDE 12 HR (PA12 HR)

TUBI FLESSIBILI
Temperature di Impiego: da -40°C a +80°C
Il tubo è fornito in rotoli da 100 mt.
Colori disponibili: Nero

POLYAMIDE 12 HR (PA12 HR)

FLEXIBLE TUBINGS
Working temperature: -40°C to +80°C.
Rolls: 100mt.
Colours available: Black

POLYAMIDE 12 HR (PA12 HR)

TUBES FLEXIBLES
Température d'exercice: -40°C jusqu' à +80°C.
Rouleaux: 100 mètres.
Couleurs disponibles: noir

POLYAMID 12 HR (PA12 HR)

FLEXIBLE SCHLÄUCHE
Temperaturbereich: -40°C bis +80°C.
Rollenlänge: 100 mt.
Farben: Schwarz

Variazione % della Pressione in funzione della temperatura
Pressure variation (%) in relation with temperature change
Variation (%) de la pression en fonction du changement de la température:
Druckschwankungen (%) im Verhältnis mit Temperaturabänderungen

-10°C	120%
0°C	110%
20°C	100%
30°C	83%
40°C	72%
50°C	64%
60°C	52%
80°C	47%

	Dimensioni-Sizes Diamètre-Durchmesser Ø e (mm)	Ø i (mm)	Peso (gr/mt) Weight (gr/mt) Poids (gr/mt) Gewicht (gr/mt)	Raggio di curvatura (mm) Bend radius (mm) Rayon de Courbure (mm) Biegeradius (mm)	Pressione a 20°C -Pressure at 20°C Pression à 20°C- Druck bei 20°C Esercizio-Working (bar) Travail-Druckbereich (bar)	Scoppio-Bursting point (bar) Point d'éclatement-Berstpunkt (bar)
1/4	6,35	3,6	18	50	90	275
3/8	9,52	5	53	80	87	261

TUBO TERMOPLASTICO

Sottostrato: PA12.
Rinforzo: Treccia di poliestere ad alta tenacità
Copertura: Poliuretano.
Temperature di Impiego: da -40°C a +70°C.
Fattore di Sicurezza: 4:1

THERMOPLASTIC HOSE

First Tube layer: Polyamide 12.
Reinforcement: high tensile polyester braid.
Cover: Polyurethane
Working Temperature: -40°C to +70°C.
Safety factor: 4:1

TUYAU THERMOPLASTIQUE

Première couche du tuyau: Polyamide 12
Insert: tresse en polyester à haute résistance.
Revêtement: Polyuréthane.
Température de travail: -40 °C +70 °C
Facteur de sécurité: 4:1

THERMOPLASTISCHER SCHLAUCH

Erste Schlauchschicht: Polyamid 12
Einlage: eine hochzugfestes Polyestergeflecht.
Decke: Polyurethan.
Temperaturbereich: -40 °C +70 °C
Sicherheitsfaktor: 4:1

Dimensioni-Sizes Diamètre-Durchmesser Ø e mm	Ø e in	Ø i mm	Ø i in	Peso (gr/mt) Weight (gr/mt) Poids (gr/mt) Gewicht (gr/mt)	Raggio di curvatura (mm) Bend radius (mm) Rayon de Courbure (mm) Biegeradius (mm)	Pressione a 20°C -Pressure at 20°C Pression à 20°C- Druck bei 20°C Esercizio-Working (bar) Travail-Druckbereich (bar)	Scoppio-Bursting point (bar) Point d'éclatement-Berstpunkt (bar)
8,1	5/16"	4	5/32"	52	45	195*/260**	780

* Pressione ad impulsi - Pulse pressure - Pression d'impulsion - Impulsdruck ** Pressione statica – Constant pressure - Pression statique - Statischer Druck

TUBO PER ALTA PRESSIONE CON MAGLIE DI RINFORZO

ISO 11237 - SAE 100 R16 - EN 857 2SC
Sottostrato: Gomma sintetica resistente all'olio.
Rinforzo: Due trecce di acciaio ad alta tenacità.
Copertura: Gomma sintetica resistente all'abrasione, all'ozono ed agli idrocarburi.
Applicazioni: Impianti oleodinamici ad alta pressione, olio combustibile, soluzioni antigelo, aria e acqua.
Temperature di Impiego:
da -40°C a +100°C. (T max aria = +70°C)
Fattore di Sicurezza: 4:1

HYDRAULIC HOSE, WIRE BRAID

ISO 11237 - SAE 100 R16 - EN 857 2SC
First Tube layer: Oil resistant synthetic rubber.
Reinforcement: Two high tensile steel braids.
Cover: Abrasion, ozone and hydrocarbon resistant synthetic rubber
Application: High pressure hydraulic lines, fuel oil, antifreeze solutions, air and water.
Working Temperature:
-40°C to +100°C. (Max Air temperature T = +70°C)
Safety dactor: 4:1

TUYAUX HYDRAULIQUE TRESSES METALLIQUE

ISO 11237 - SAE 100 R16 - EN 857 2SC
Première couche du tuyau: caoutchouc synthétique résistant à l'huile
Insert: deux tresses en acier à haute résistance.
Revêtement: tuyau en caoutchouc synthétique résistant à l'abrasion, à l'ozone et aux hydrocarbures.
Application: systèmes hydrauliques haute pression, huile de chauffage, solutions antigel, air et eau.
Température de travail: -40° C +100° C
(Max température de l'air T = +70° C)
Facteur de sécurité: 4: 1

HYDRAULIK SCHLÄUCHE, DRAHTGEFLECHT

Erste Schlauchschicht: ölbeständiger synthetischer Gummischlauch
Einlage: zwei hochzugfeste Stahlgeflechte.
Decke: abrieb-, ozon- und kohlenwasserstoffbeständiger synthetischer Gummischlauch.
Anwendung: Hochdruck - Hydrauliksysteme, Heizöl, Frostschutzlösungen, Luft und Wasser.
Temperaturbereich: -40 °C +100 °C
(Max. Lufttemperatur T = +70 °C)
Sicherheitsfaktor: 4:1

Dash	Dimensioni-Sizes Diamètre-Durchmesser Ø e mm	Ø e in	Ø i mm	Ø i in	Peso (gr/mt) Weight (gr/mt) Poids (gr/mt) Gewicht (gr/mt)	Raggio di curvatura (mm) Bend radius (mm) Rayon de Courbure (mm) Biegeradius (mm)	Pressione a 20°C -Pressure at 20°C Pression à 20°C- Druck bei 20°C Esercizio-Working (bar) Travail-Druckbereich (bar)	Scoppio-Bursting point (bar) Point d'éclatement-Berstpunkt (bar)
04	13	.51	6	1/4"	255	75	400	1600
06	16,5	.65	10	3/8"	370	90	330	1320
08	19,9	.78	13	1/2"	470	130	275	1100
12	27,6	1.09	19	3/4"	789	200	215	860

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POLYAMIDE 12

FLEXIBLE TUBING

Limited humidity absorption, great dimensional stability at high temperatures and good chemical resis- tance are the major features of the Cmatic Polyamide 12, highly recommended for all standard industrial applications.

Working temperature: from -40°F up to +212°F
Vacuum rating: To 28" Hg
Hardness: 64 Shore D
Working Pressure: 4 to 1 Safety Factor
Water absorption: 1%
Diameter Tolerances: +/- .002

Pressure variation (%) in relation with temperature change	
68°F	100%
104°F	85%
140°F	60%
176°F	40%
212°F	35%

Part Number	Diameter OD (in)	Diameter ID (in)	Bend Radius (in)	Pressure at 75°F Working pressure (psi)	Pressure at 75°F Bursting point (psi)
28010000-colour	1/8	.093	.375	264	1058
28010010-colour	5/32	.106	.500	348	1392
28010030-colour	1/4	.180	.875	293	1174
28010040-colour	5/16	.232	1.250	268	1073
28010050-colour	3/8	.275	1.500	279	1116
28010060-colour	1/2	.375	2.000	257	1029

Reel length: 100 feet.
Colours available: Neutral (N), Blue (B) and Black (BK) on stock. Other colours available upon request.

POLYURETHAN 95 DUROMETER

FLEXIBLE TUBING

Cmatic ether based Polyurethan resists attack with moisture, humidity and fungus.
It is highly abrasion and UV resistant.
Its flexibility allows for assemblies in reduced spaces and for very narrow bending radius and makes of our Polyu- rethan 95 one of the most popular choices.

Working temperature: from -40°F up to +140°F.
Vacuum rating: To 28" Hg
Hardness: 95 Shore A
Working Pressure: 3 to 1 Safety Factor
Diameter Tolerances: +/- .003

Pressure variation (%) in relation with temperature change	
68°F	100%
86°F	83%
104°F	72%
122°F	64%
140°F	47%

Part Number	Diameter OD (in)	Diameter ID (in)	Bend Radius (in)	Pressure at 75°F Working pressure (psi)	Pressure at 75°F Bursting point (psi)
28060000-colour	1/8	.0625	1/4	256	768
28060010-colour	5/32	3/32	3/8	193	580
28060030-colour	1/4	.160	1/2	169	507
28060040-colour	5/16	.216	3/4	140	420
28060050-colour	3/8	.245	7/8	164	493
28060060-colour	1/2	.320	1 1/8	169	507

Reel length: 100 feet.
Colours available: Neutral (N), Blue (B) and Black (BK) on stock. Other colours available upon request.

POLYAMIDE 12 HR (PA12 HR)

FLEXIBLE TUBINGS

Working temperature:from -40°F up to 176°F.
Working Pressure: 3 to 1 Safety Factor
Reel length: 328 feet (100 mt.)
Colours available: Black

Pressure variation (%) in relation with temperature change	
14°F	120%
32°F	110%
68°F	100%
86°F	83%
104°F	72%
122°F	64%
140°F	52%
176°F	47%

Part Number	Diameter OD (in)	Diameter ID (in)	Bend Radius (in)	Pressure at 75°F Working pressure (psi)	Pressure at 75°F Bursting point (psi)
08130030-N	1/4	.142	1.969	1305	3741
08130050-N	3/8	.197	3.150	1261	3785

PA11 and PTFE tubings available upon request.

CONDIZIONI GENERALI DI FORNITURA

1. NOTE GENERALI

Le seguenti condizioni generali di fornitura sono ritenute valide e applicabili in tutte le pratiche commerciali di C.Matic con riferimento a tutti i prodotti fabbricati o venduti da C.Matic.
Le presenti condizioni generali costituiscono la base giuridica per ogni contratto stipulato da C.Matic, tranne nei casi in cui, in specifici ordini o accordi, ne venga fatta espressamente rinuncia per iscritto.
Tali termini prevalgono su tutti i termini di acquisto del Cliente e costituiscono parte essenziale del contratto di fornitura utilizzato da C.Matic nei confronti del Cliente.
Pertanto, le condizioni generali di fornitura di seguito riportate, riguardano tutti i contratti e tutti gli ordini eseguiti anche se non espressamente confermati dal Cliente.
Le presenti condizioni generali di fornitura, in ogni caso, sono da considerarsi automaticamente accettate dal Cliente e, pertanto, costituiscono parte integrante dell'ordine, nel momento in cui il Prodotto C.Matic viene reso disponibile al Cliente per la prima volta e, in ogni caso, all'esecuzione dell'ordine da parte di C.Matic.

2. AMBITO DI APPLICAZIONE DEL CONTRATTO

Quanto segue verrà considerato parte integrante del contratto stipulato da C.Matic:
a) le presenti condizioni generali di fornitura, che si intendono in ogni caso applicabili indipendentemente dall'espressa accettazione scritta da parte del Cliente.
b) ogni documento tecnico, studio, relazione, a qualsiasi titolo inviato da C.Matic al Cliente.
c) la conferma dell'ordine
d) la bolla di consegna
e) la fattura
Documenti pubblicitari, opuscoli di vendita, campioni, cataloghi, listini prezzi e qualsiasi altra cosa utilizzata o inviata da C.Matic prima o durante l'esecuzione della fornitura non saranno presi in considerazione, a meno che ciò non venga espressamente concordato in forma scritta tramite elementi essenziali del contratto.

3. ORDINI E FORMALIZZAZIONE DEL CONTRATTO

Qualsiasi preventivo di C.Matic è soggetto a e non diventerà vincolante per C.Matic fino a (i) l'effettiva ricezione da parte di C.Matic dell'ordine scritto del cliente in base a tutti i termini e le condizioni qui indicati e (ii) l'accettazione scritta da parte di C.Matic di tale ordine presso la sede principale.
L'ordine indica qualsiasi documento contenente i dettagli identificativi della fornitura da effettuare, come quantità, tipo di prodotto e prezzo. L'ordine si intende trasformato in un contratto finalizzato sia in caso di chiara accettazione da parte di C.Matic tramite qualsiasi mezzo scritto (fax, e-mail, ecc.) o in caso di esecuzione della prima fornitura al Cliente.
L'esecuzione della fornitura indica il materiale messo a disposizione del Cliente come previsto al successivo punto 7.2.
Anche in presenza di discrepanze tra l'offerta, l'ordine ricevuto dal Cliente e la conferma dell'ordine inviata da C.Matic, il contratto è da intendersi in ogni caso come stipulato e finalizzato con la parte acquirente.
C.Matic può, a sua esclusiva discrezione e in qualsiasi momento, non accettare ordini dal Cliente o interrompere o sospendere, con sufficiente preavviso, l'esecuzione degli ordini pianificati.

3.1 Ordine chiuso

Per ordine chiuso si intende quell'ordine in cui la quantità di prodotto, il prezzo, i metodi di consegna e le tempistiche sono espressamente identificati.

3.2 Ordine in bianco o pianificato

Per ordine "in bianco" si intende quell'ordine che, avendo stabilito il tipo di Prodotto e il relativo prezzo unitario, in generale, indica una stima delle quantità di prodotto consumabili da parte del Cliente nel periodo di tempo espressamente indicato e concordato tra C.Matic e il Cliente (settimana/mese/anno). C.Matic e il Cliente determineranno le quantità che il Cliente acquista irrevocabilmente entro il periodo di tempo concordato al fine di ottenere il prezzo stabilito. C.Matic può modificare il prezzo dei Prodotti nel caso in cui il Fornitore non raggiunga, entro il periodo di tempo stabilito, il volume di vendite concordato.
La responsabilità di C.Matic è in ogni caso limitata alla quantità concordata o, nel caso in cui l'ordine comprenda una quantità minima e una quantità massima, alla quantità minima. C.Matic non è tenuta a garantire la fornitura di quantità aggiuntive di Prodotto o a rispettare tempi di consegna più onerosi di quelli espressamente accettati dalla stessa C.Matic. Se il cliente richiede la modifica del contenuto di un qualsiasi ordine, C.Matic non è tenuta a soddisfare tale richiesta, ad ogni modo si sforzerà per soddisfare la richiesta fatta dal Cliente. In caso di accettazione, C.Matic sarà autorizzata a modificare il prezzo dei Prodotti.
A tale fine, C.Matic comunicherà al Cliente la differenza di prezzo del Prodotto: tale variazione si intende applicabile in caso di espressa accettazione da parte del Cliente o sarà considerata "in vigore" a partire dalla prima consegna del prodotto a seguito della comunicazione da parte di C. Matic.

3.3 Modifiche agli ordini

Qualsiasi richiesta di modifica del contratto fatta dal Cliente è soggetta ad espressa accettazione da parte di C.Matic. In assenza di espressa accettazione da parte di C.Matic, le condizioni contrattuali precedentemente concordate saranno intese come invariate, subordinatamente, in ogni caso, all'applicabilità delle presenti condizioni generali di fornitura.

3.4 Annullamento di ordini chiusi o riduzione al di sotto delle quantità minime per ordini in bianco

In nessun caso, salvo circostanze di forza maggiore, il Cliente può annullare un ordine chiuso o ridurre le quantità minime di un qualsiasi tipo di ordine.
Se il Cliente intende procedere in tal senso, deve notificare tale richiesta in forma scritta a C.Matic che, nei successivi 30 giorni, può accettare o rifiutare la richiesta presentata o indicare al Cliente il costo di accettazione.
In caso contrario, il Cliente sarà tenuto a ricevere e pagare il prodotto in conformità a quanto concordato o in conformità con le quantità massime indicate o concordate negli ordini in bianco.
Nell'indicare il costo per l'annullamento o la riduzione, a seconda del contratto, dell'ordine aperto o di ordine in bianco al di sotto dei minimi, C.Matic può tener conto di tutti i costi sostenuti e da sostenere per gli acquisti, anche relativamente a materie prime e forniture, attrezzature e strumenti specifici o di altro tipo, costi di ricerca e progettazione e, in ogni caso, tutti i costi e/o eventuali conseguenze dirette e indirette che, per qualsiasi motivo, hanno una rilevanza economica per C.Matic.
C.Matic può trattenere, in via definitiva, e per qualsiasi motivo aggiuntivo, qualsiasi somma ricevuta dal Cliente pagata a qualsiasi titolo.

4. LAVORI PREPARATORI /O ACCESSORI RELATIVI ALL'ORDINE

4.1 Progetti e requisiti

Tutti i documenti, i progetti, le stime, i rapporti tecnici, le valutazioni, le offerte, le analisi e, in ogni caso, qualsiasi informazione o documento che, a qualsiasi titolo, il Cliente e C.Matic si sono scambiati prima o durante l'esecuzione dell'ordine, sono da intendersi come inviati solo per l'uso specifico al quale sono destinati senza che tale trasmissione comporti un trasferimento di proprietà o diritti di utilizzo.
In ogni caso, il destinatario non può utilizzare ciò che viene ricevuto per altri scopi.
Il Cliente e C.Matic manterranno tutti i reciproci diritti di proprietà, compresi quelli intellettuali, sulla documentazione oggetto di scambio. Resto inteso che il Cliente e C.Matic siano vincolati dalla massima riservatezza e segretezza, come concordato al successivo punto 6, in relazione all'esistenza e al contenuto dei documenti scambiati.
In caso di utilizzo diverso da quanto consentito o previsto per il materiale oggetto di scambio, la parte lesa avrà diritto al risarcimento del danno. Il Cliente riconosce, in ogni caso, la proprietà esclusiva di ciò che viene ricevuto a qualsiasi titolo da C.Matic e che ciò costituisce il know-how di C.Matic.

4.2 Restituzione dei campioni

Tutti i campioni, prototipi, prodotti pre-serie o semilavorati o, in ogni caso, manufatti inviati da C.Matic al Cliente sono e rimarranno di proprietà di C.Matic e il Cliente potrà utilizzarli solo per gli scopi indicati nel contratto stipulato con C.Matic.
Il Cliente sarà responsabile della custodia di quanto viene ricevuto e si impegna a restituire tutto il materiale ricevuto in caso di risoluzione del contratto o entro 15 giorni dal momento in cui C.Matic presenta esplicita richiesta in tal senso.
Il Cliente dovrà utilizzare il materiale ricevuto con la massima riservatezza e segretezza e non potrà in alcun modo utilizzare, neppure al fine dell'esecuzione di prove, direttamente o indirettamente, qualsiasi cosa ricevuta da C.Matic senza il previo consenso scritto di quest'ultima.
Se un campione o modello viene mostrato o consegnato al Cliente, il Cliente riconosce che tale campione o modello viene utilizzato al mero scopo illustrativo delle caratteristiche generali e della qualità dei prodotti e non per dimostrare che i prodotti sarebbero necessariamente conformi al campione o al modello.
In caso di violazione di questa clausola, C.Matic può sospendere le forniture e chiedere il risarcimento dei danni.

4.3 Conservazione delle attrezzature

L'apparecchiatura, anche quella soggetta a usura, necessaria alla creazione del Prodotto per il Cliente, si intende, salvo diverso accordo scritto, di proprietà esclusiva di C.Matic. Gli strumenti per la produzione saranno progettati da C.Matic o da una società da essa incaricata e terranno conto dei metodi di lavoro, dei sistemi e delle attrezzature normalmente utilizzati da C.Matic.
C.Matic può chiedere al Cliente un contributo spese per quanto sopra indicato. Tale costo potrebbe anche non essere espressamente specificato, ma incluso nel prezzo del prodotto alla consegna. Anche in questo caso, gli strumenti necessari alla produzione verranno considerati come esclusiva proprietà di C.Matic senza alcun contributo che garantisca al Cliente i diritti d'uso o di proprietà, anche solo intellettuali o tramite know-how.
C.Matic, se non diversamente concordato con atto scritto, può utilizzare liberamente l'attrezzatura e, in generale, qualsiasi strumento di lavoro, anche per produzioni diverse da quella destinata al Cliente e anche nel caso di produzione creata esclusivamente per il Cliente.

5. CARATTERISTICHE E CONDIZIONI DEI PRODOTTI ORDINATI

5.1 Utilizzo dei prodotti

C.Matic si impegna a produrre il Prodotto nel rispetto delle specifiche tecniche concordate con il Cliente (prodotti speciali) o come specificato nel catalogo (prodotto standard). Il Prodotto sarà inoltre conforme alle norme di sicurezza in vigore nell'UE a tale riguardo. Il Cliente sarà l'unico responsabile per quanto riguarda l'utilizzo del prodotto.
Il Prodotto deve essere utilizzato esclusivamente in conformità con quanto indicato nel catalogo o concordato per iscritto con C.Matic.
C.Matic non sarà responsabile per le conseguenze derivanti da un eventuale utilizzo dei Prodotti non autorizzato, errato o differente con riferimento a quanto dichiarato nel catalogo di C. Matic o diverso da quanto autorizzato per iscritto da C.Matic. Laddove il Cliente deve utilizzare il Prodotto in modo diverso da quanto concordato, deve fornire informazioni specifiche a C.Matic.
C.Matic, una volta ricevuta la richiesta, avrà 30 giorni per confermare la propria disponibilità a soddisfare la richiesta del Cliente fornendo anche un'indicazione dei tempi e del nuovo prezzo; il Cliente dovrà confermare per iscritto l'accettazione della comunicazione ricevuta da C.Matic.
Salvo quanto precedentemente concordato o comunque noto a C.Matic, il Prodotto fornito non può essere conservato in luoghi in cui sono immagazzinati materiali, inclusi materiali potenzialmente esplosivi, inquinanti o infiammabili, o in locali in cui i livelli di umidità o temperatura non sono conformi al tipo di prodotto consegnato.
Il Cliente accetta, e tramite la presente rinuncia al diritto di presentare eventuali reclami, che le quantità indicate da C.Matic si intendono sempre con un margine del +/- 5%.
Il Cliente si impegna, in ogni caso, ad accettare anche forniture parziali di Prodotto.

5.2 Imballaggio del prodotto

C.Matic fornirà il prodotto imballato in conformità con le proprie norme e alle normative esistenti in materia di sicurezza.
Il Cliente, inviando l'ordine, dichiara espressamente di essere a conoscenza e di aver accettato il tipo di imballo utilizzato da C.Matic e di ritenere che il suddetto "standard" sia adeguato alle proprie esigenze di trasporto, movimentazione, deposito e stoccaggio; tutte le eventuali attività derivanti saranno a cura e spese del Cliente.
Il Cliente sarà il solo responsabile del corretto immagazzinamento e stoccaggio del Prodotto, attività che devono essere attuate in modo tale da consentire la corretta conservazione delle caratteristiche tecniche e funzionali del Prodotto fornito.
C.Matic non è imputabile di alcuna responsabilità in caso di utilizzo di imballaggi diversi da quelli utilizzati da C.Matic o per quanto riguarda l'immagazzinamento, lo stoccaggio o la movimentazione del prodotto eseguiti in modo non conforme alle caratteristiche del prodotto.

5.3 Trasmissione di informazioni relative al Prodotto

Il Cliente si impegna a sensibilizzare i propri acquirenti in merito alle caratteristiche tecnico-funzionali del Prodotto.

6. CLAUSOLA RELATIVA AI DIRITTI DI PROPRIETÀ INTELLETTUALE E ALLA RISERVATEZZA

6.1 Diritti di proprietà intellettuale e know-how tecnico

C.Matic è l'unico proprietario dei diritti relativi a qualsiasi informazione, dato, progetto, caratteristica, processo, composizione chimica, caratteristica funzionale e per qualsiasi elemento relativo al Prodotto. La proprietà in merito a tali diritti rimarrà valida anche dopo la consegna del Prodotto.
L'attuazione del contratto di fornitura non costituirà, in ogni caso, il trasferimento dei diritti di proprietà industriale o della licenza di utilizzo del know-how relativamente al Prodotto e/o al processo di produzione, C.Matic, come proprietario dei diritti precedentemente stabiliti, si riserva il diritto di utilizzare per i propri scopi, i risultati di verifiche, prove o esperimenti eseguiti in qualsiasi modo sul Prodotto, anche dopo la consegna.

6.2 Clausola di riservatezza

Il Cliente, durante il rapporto di fornitura e per 5 anni dalla sua conclusione, sarà tenuto a rispettare scrupolosamente la riservatezza e la segretezza di tutto ciò di cui, in occasione dell'esecuzione o della preparazione del contratto, viene a conoscenza (documenti, dati, caratteristiche, elementi, informazioni tecniche, prezzi, progetti, grafici, relazioni, bozze, note, ecc.).
Il Cliente si impegna a conservare tutto il materiale ricevuto da C.Matic con la stessa cura e nel rispetto di una rigorosa segretezza, come se quanto ricevuto o scambiato fosse di sua esclusiva proprietà.
C.Matic e il Cliente devono consentire solo alle persone coinvolte nell'esecuzione della fornitura l'accesso ai dati, ai documenti e a tutto il materiale ricevuto.
Il Cliente dichiara espressamente la propria conformità alle procedure nel rispetto della privacy prevista dalle normative vigenti.
Se necessario, C.Matic e il Cliente nomineranno, notificando all'altro tale nominativo, una persona responsabile della gestione dei dati sensibili a cui questi possono essere trasmessi.
L'obbligo di riservatezza e segretezza non si applica in caso di:
- informazioni di dominio pubblico o comunque già conosciute al momento della stipula del contratto.
- informazioni che sono già disponibili prima della stipula del contratto.
- obbligo di divulgazione di informazioni quando richiesto da un'autorità giudiziaria o da un'autorità pubblica in generale.

Qualsiasi violazione della presente clausola darà diritto a C. Matic di richiedere un risarcimento per danni e/o la risoluzione del contratto.

6.3 Garanzia contro la contraffazione

Laddove il Prodotto venga realizzato su misura o prodotto in conformità con indicazioni o informazioni fornite dal Cliente, quest'ultimo sarà l'unico responsabile per qualsiasi violazione, anche relativa al processo di produzione, dei diritti di terzi in relazione alla proprietà industriale e si impegna a manlevare C.Matic da qualsiasi conseguenza diretta o indiretta che la disponibilità o l'utilizzo, a qualsiasi titolo, di tali informazioni o del Prodotto stesso possano causare, direttamente o indirettamente, a C.Matic o a terze parti. Il Cliente, infine, si farà carico direttamente o comunque manterrà C.Matic indenne relativamente a tutti i danni diretti e indiretti e a tutti i costi, incluso il supporto legale o qualsiasi altro motivo professionale, anche tecnico, compresi eventuali compensi di Professionisti ingaggiati da C.Matic in caso di azione legale o stragiudiziale o per eventuale mediazione, intentata contro C.Matic o da essa a causa di qualsiasi violazione degli obblighi stabiliti nella presente clausola.

7. CONSEGNA, TRASPORTO, VERIFICA E ACCETTAZIONE DEL PRODOTTO

7.1 Termine di consegna

C.Matic farà il possibile per rispettare il termine di consegna concordato con il Cliente.
In nessun caso, tuttavia, la data di consegna può essere considerata obbligatoria e vincolante per la corretta esecuzione dell'ordine. Il Cliente rinuncia espressamente al diritto di presentare qualsiasi richiesta di risarcimento per danni o rimborso a qualsiasi titolo o di richiedere la risoluzione del contratto in caso di mancato rispetto del termine di consegna del Prodotto.
Come indicato sopra, tutte le date di consegna sono approssimative e C.Matic non sarà responsabile per eventuali danni di qualsiasi tipo derivanti da eventuali ritardi.
C.Matic si riserva il diritto di comunicare al Cliente, tramite qualsiasi mezzo, eventuali modifiche ai termini di consegna quando la modifica è di particolare importanza. Il Cliente può richiedere a C.Matic di fare del proprio meglio per migliorare l'esecuzione della consegna, ma in nessun caso può rifiutarsi di pagare il Prodotto.
C.Matic si riserva il diritto di sospendere, a tempo indeterminato, la consegna del Prodotto in caso di mancato pagamento delle forniture. Allo stesso modo, in qualsiasi caso di inadempienza, C.Matic può, qualora ve ne siano le condizioni, ritenere che l'esclusività del prodotto riservato al Cliente sia risolta e non più esistente.

7.2 Termini di consegna (franco fabbrica)

Salvo diversamente concordato, la consegna del Prodotto sarà effettuata "franco fabbrica" e si intende eseguita il giorno e l'ora in cui viene completato il carico delle merci sul veicolo utilizzato dal corriere o dallo spedizioniere o, in in ogni caso, dalla comunicazione eseguita da C.Matic in merito alla disponibilità delle merci.
A partire da tale data, al Cliente verranno trasferiti tutti i diritti e le responsabilità relative al Prodotto anche se ancora fisicamente immagazzinato presso lo stabilimento di C.Matic.
Il Cliente è tenuto a ritirare il Prodotto direttamente o indirettamente entro 5 giorni dalla notifica della disponibilità delle merci. In caso di ritardo nel ritiro della merce oltre il termine sopra indicato, C.Matic addebiterà al Cliente tutti i costi e gli esborsi necessari per lo stoccaggio, il deposito e la movimentazione della merce.
A tal fine, C.Matic emetterà la fattura corrispondente che dovrà essere pagata prima del ritiro del Prodotto e comunque entro i termini di cui al punto 10.1.
Trascorsi 10 giorni dalla notifica della disponibilità della merce per la consegna, C.Matic può, a sua esclusiva discrezione, imporre al Cliente il pagamento dei costi sopra indicati, vendere il Prodotto a terzi, distruggerlo a spese del Cliente, o riutilizzarlo, addebitando al Cliente tutti gli eventuali costi derivanti. La fattura emessa per un tale motivo è da ritenersi immediatamente esigibile. Analogamente, in caso di mancato prelievo del Prodotto, entro il termine sopra indicato, C.Matic potrà considerare qualsiasi tipo di esclusività concessa al Cliente, qualora esistente, risolta, anche in merito alla prosecuzione del contratto con il Cliente.
C.Matic invierà in tempo utile al Cliente o al trasportatore la notifica di "merce pronta per la consegna". Il Cliente, o il trasportatore sotto la responsabilità del Cliente, ritirerà il Prodotto alla data e all'ora indicate nella notifica di "merce pronta per la consegna" come ricevuta da C.Matic. Qualora la merce non venga ritirata in conformità a quanto indicato nella notifica di "merce pronta per la consegna", il Cliente dovrà sostenere i costi, gli esborsi o le spese, di qualsiasi natura (deposito, assicurazione, movimentazione, immagazzinamento, uso dello spazio, ecc.), sostenute da C.Matic come già specificato in precedenza.

7.3 Trasporto, spese doganali, assicurazione

Salvo quanto espressamente previsto nell'ordine, il trasporto sarà sempre effettuato a cura e spese del Cliente che, se ritenuto necessario e sotto propria esclusiva responsabilità, assicurerà il Prodotto durante il trasporto.
Qualora C.Matic si assuma la responsabilità della spedizione del Prodotto a destinazione, il trasferimento del rischio avverrà alla consegna del Prodotto al primo spedizioniere o al primo trasportatore.
Il Cliente dovrà sempre sostenere, se non diversamente concordato, le spese doganali, di trasporto e le spese di deposito a destinazione, procedendo, se del caso, all'adempimento delle procedure di spedizione, carico, scarico e sdoganamento, indipendentemente dal mezzo di trasporto scelto dal Cliente.
Il cliente dovrà fornire a C.Matic una prova di sdoganamento del prodotto e relativa ricevuta.
C.Matic, tuttavia, non sarà mai tenuto ad assicurare il Prodotto, indipendentemente dai metodi di consegna concordati.

7.4 Verifica delle quantità e del tipo di Prodotto consegnato

Il Cliente dovrà verificare le quantità e il peso del Prodotto tramite personale proprio, nonché la conformità del Prodotto ai termini dell'ordine; tale controllo sarà effettuato a spese del Cliente e sotto sua esclusiva responsabilità non appena la consegna verrà effettuata.
Eventuali controversie o riserve relative a chiari difetti del Prodotto devono essere immediatamente annotate sulla bolla di consegna, sul CMR, sulla lettera di vettura o sul documento di trasporto. Una copia della bolla di consegna, della lettera di vettura o della bolla di trasporto con le relative riserve o controversie deve essere inviata per informazione a C.Matic che, in ogni caso, non sarà responsabile per eventuali mancanze né per le riserve espresse dal Cliente, salvo ove sia dimostrabile che il difetto oggetto della riserva era già esistente al momento della consegna del prodotto presso lo stabilimento di C.Matic. In assenza di riserve annotate sulla bolla di consegna, sul CMR, sulla lettera di vettura o sul documento di trasporto, il Prodotto, dal punto di vista della tipologia e delle quantità, sarà inteso come accettato in via definitiva, con espressa rinuncia irrevocabile da parte del Cliente al diritto di presentare reclamo in qualsiasi sede, a tal fine, in merito a diritti di qualsiasi natura.

7.5 Controversia in relazione all'esistenza di difetti

C.Matic è tenuto a consegnare il Prodotto privo di difetti e conformemente a quanto indicato nell'ordine.
La qualità del Prodotto si intende riferita allo "standard" C.Matic, ben noto al Cliente.
Il Cliente, in caso di difetti presenti nel Prodotto, dovrà, a pena

di decadenza entro 10 giorni di calendario dalla consegna, presentare reclamo per il Prodotto fornito, inviando a C.Matic un'adeguata comunicazione scritta contenente l'elenco dei difetti o dei guasti, il numero di articoli su cui sono stati identificati tali difetti o guasti, i metodi con cui sono stati effettuati i controlli, il numero di lotto e qualsiasi prova utile per consentire a C.Matic di identificare esattamente il Prodotto oggetto di contestazione.
Il Cliente, qualora venga richiesto da C.Matic, dovrà restituire, a propria cura e spese, il Prodotto oggetto di reclamo.
C.Matic, a sua esclusiva discrezione, e senza che ciò costituisca alcun riconoscimento di alcuna responsabilità, può riparare il prodotto, rispedendolo al Cliente. In tal caso, C.Matic si farà carico delle spese di trasporto.
Laddove C.Matic non identifichi la presenza dei difetti o dei guasti contestati, può invitare il Cliente al proprio stabilimento per una valutazione congiunta dei risultati relativi alle indagini, dopodiché il Prodotto verrà rispedito al Cliente a sue spese.
Ad ogni modo, C.Matic può, a sua esclusiva discrezione, e senza che ciò costituisca alcun riconoscimento di responsabilità, procedere alla sostituzione del prodotto oggetto di reclamo, inviandone uno nuovo al Cliente.
In nessun caso il Cliente può sospendere il pagamento del Prodotto anche se soggetto a contestazione totale o parziale. Allo stesso modo, anche in caso di contestazione totale o parziale della fornitura effettuata, il Cliente non può sospendere il pagamento di alcuna somma per qualsiasi motivo dovuto a C.Matic.
Il Cliente non può, per qualsiasi motivo, eseguire autonomamente o aver eseguito processi o interventi di terze parti sul Prodotto. In tal caso il Prodotto non sarà più garantito, il che significa, inoltre, che il Cliente rinuncia irrevocabilmente al diritto di reclamo in qualsiasi sede relativamente a qualsiasi responsabilità da parte di C.Matic.
Laddove il Cliente, in presenza di evidenti difetti o guasti, decida di non informarne C.Matic e utilizzi, esegua il montaggio o venda il Prodotto, perderà qualsiasi diritto alla sostituzione o alla riparazione del Prodotto.
Inoltre, la garanzia fornita da C.Matic, conformemente al punto 7.6 seguente, viene considerata risolta.
In ogni caso, salvo indicazione contraria inviata da C.Matic, il Cliente si assumerà la responsabilità esclusiva dell'attività e dei costi di disassemblaggio, stoccaggio, smaltimento del Prodotto oggetto di contestazione e delle attività e dei costi di assemblaggio del nuovo Prodotto, anche se revisionato o rispedito da C.Matic al Cliente.
Eventuali reclami o controversie non esonerano il Cliente dall'obbligo di onorare eventuali obblighi sottoscritti nei confronti di C.Matic, indipendentemente dal motivo per il quale sono stati contratti.

7.6 Garanzia - durata

C.Matic, se non diversamente concordato, garantisce il Prodotto fornito per un periodo non superiore a dodici mesi. La garanzia ha inizio a partire dalla notifica di "merce pronta per la consegna" o dal giorno della consegna franco fabbrica.
L'efficacia della garanzia ha valore nel caso di un uso corretto del Prodotto e quando il malfunzionamento dello stesso o il difetto identificato nel Prodotto non è anche indirettamente o parzialmente attribuibile al Cliente o all'utente finale o in caso di uso non autorizzato o incoerente del Prodotto.

7.7 Accettazione

Trascorso il termine di 10 giorni dalla consegna del prodotto e in assenza di controversie, il Prodotto fornito sarà ritenuto definitivamente accettato e il Cliente avrà rinunciato alla possibilità di presentare reclami, contestazioni o richieste di qualsiasi tipo.
In nessun caso dopo l'accettazione potrà stato richiesto a C. Matic di sostituire o riparare il Prodotto fornito o di sostenere costi o esborsi anche a titolo di risarcimento danni.

8. CLAUSOLA DI AVVERSITÀ E CAUSE DI FORZA MAGGIORE

8.1 Condizioni per la modifica dei prezzi del Prodotto

C.Matic può modificare i prezzi del Prodotto anche dopo l'accettazione dell'ordine e la conclusione del contratto. C.Matic comunicherà per iscritto al cliente il nuovo prezzo, indicando i motivi per i quali tale modifica è necessaria. Il nuovo prezzo sarà vincolante per il Cliente a partire dalla prima consegna successiva alla comunicazione o comunque trascorsi 10 giorni di calendario dalla comunicazione inviata al Cliente.
C.Matic, qualora si verifichino eventi eccezionali che rendono particolarmente onerosa l'esecuzione dell'ordine, può risolvere o recedere in qualsiasi momento dal contratto, annullare l'ordine o il programma di consegna, senza che il Cliente possa presentare reclamo, con l'intesa della rinuncia irrevocabile a tale diritto, o a qualsiasi rimborso o risarcimento.

8.2 Cause di forza maggiore

C.Matic può sospendere i propri obblighi di fornitura e, in ogni caso, gli impegni contrattuali con il Cliente per qualsiasi evento di Forza Maggiore. Laddove C.Matic intenda far valere tale diritto, deve prontamente informare il Cliente per iscritto, indicando il relativo motivo di Forza Maggiore e, se possibile, la durata prevista della sospensione degli obblighi contrattuali assunti. Se la causa della sospensione si protrae per più di 90 giorni lavorativi, il Cliente può, temporaneamente, procurarsi il Prodotto richiesto da un altro fornitore, previo impegno, per il Cliente, una volta terminata la causa di Forza Maggiore, di riacquistare il Prodotto da C.Matic.
C.Matic si impegna a comunicare per iscritto al Cliente il termine della causa di Forza Maggiore, indicando anche la data della prima consegna del Prodotto dopo l'evento di Forza Maggiore.
Il cliente è tenuto ad accettare tali consegne. Se l'evento di forza maggiore si protrarrà per più di 90 giorni, C.Matic e il Cliente si incontreranno per valutare la possibilità di ritenere che il contratto di fornitura venga risolto.
In ogni caso, il Cliente dovrà adempiere alla ricezione e al pagamento di tutti i Prodotti in giacenza presso C.Matic, al pagamento dei prodotti semilavorati, materie prime, documentazione e tutto ciò che è stato specificamente acquistato o prodotto da parte C.Matic per l'esecuzione della fornitura. Inoltre, C.Matic può utilizzare l'evento di Forza Maggiore in tutti i casi in cui le proprie prestazioni diventano particolarmente onerose o impossibili. Le seguenti circostanze costituiscono evento di Forza Maggiore, a titolo di elenco indicativo ma non esaustivo:

- disastri naturali (terremoti, incendi, inondazioni, tempeste, ecc.).
- conflitti armati, guerre, controversie, attacchi, rivolte, atti terroristici.
- conflitti o controversie sindacali o del settore, serrate, scioperi generali e di settore nello stabilimento di C.Matic o della stessa C.Matic.
- conflitti o controversie sindacali, serrate o scioperi generali, industriali o di impianto, anche se relativi a C.Matic o a quanto di sua pertinenza, trasportatori, società di servizi, spedizionieri, uffici postali in generale o, in ogni caso, tutti coloro che sono coinvolti nel processo di produzione.
- ordini di autorità giudiziarie, governative o pubbliche in generale.
- divieti all'importazione, embarghi, blocchi alla produzione imposti dalla sanità o dall'autorità pubblica in generale.
- incidenti sul lavoro, sequestri, guasti alle macchine, esplosioni, carenze energetiche e qualsiasi evento che possa limitare o escludere la possibilità di produzione.
- carenza o costo eccessivo delle materie prime.

Laddove il Cliente intenda far valere l'evento di Forza Maggiore, deve prontamente informare C.Matic.
In tal caso, il Cliente dovrà anche indicare a C.Matic le procedure tramite cui il Prodotto può essere ricevuto, possibilmente anche in una sede diversa da quella concordata. In tal caso, il Cliente sosterrà l'eventuale costo aggiuntivo indicato da C.Matic.
In nessun caso il Cliente può fare uso dell'evento di Forza Maggiore per sospendere i pagamenti delle forniture

9. DEFINIZIONE DEI PREZZI

I prezzi indicati da C.Matic si intendono tutti al netto di imposte, aliquote e dazi sul Prodotto. Salvo diversamente concordato, i prezzi sono in ogni caso da intendersi come "franco fabbrica". Salvo diversamente concordato, i prezzi saranno sempre espressi in Euro.

10. PAGAMENTI

10.1 Termini di pagamento

Il pagamento delle forniture, se non diversamente concordato, avverrà al domicilio di C.Matic, indipendentemente da eventuali controversie, previa ricezione della fattura proforma o della fattura stessa in anticipo. C.Matic può disporre dei pagamenti ricevuti in forma esclusiva, fornendone informazione al Cliente.
C.Matic non è tenuto a concordare alcuno sconto in caso di pagamento anticipato del Prodotto.

10.2 Ritardi di pagamento

Fatto salvo quanto indicato nel presente contratto, in caso di mancato pagamento del Prodotto entro il termine indicato al punto 10.1, si matureranno interessi a favore di C.Matic pari al tasso stabilito dal Decreto Legislativo 231/2002 della legge italiana.
C.Matic è autorizzata a emettere una fattura per interessi secondo i metodi indicati al presente punto e a inviarla al Cliente. La fattura includerà anche i costi sostenuti da C.Matic per tale attività. Il cliente deve procedere immediatamente al pagamento di quanto dovuto. Laddove viene emessa una fattura per interessi e/o costi per ritardo di pagamento, C.Matic può, a sua esclusiva discrezione, predisporre che tutti i pagamenti successivamente effettuati dal Cliente siano a saldo della fattura per interessi e costi e, solamente per eventuali importi residui, a pagamento del Prodotto fornito.
Inoltre, C.Matic può, in caso di mancato pagamento, sospendere la consegna del Prodotto, rifiutare la richiesta di ulteriori consegne e/o ritenere risolto il contratto o anche l'impegno assunto a evadere eventuali ordini successivi del Prodotto.
Allo stesso modo, C.Matic, in caso di mancato pagamento entro la data di pagamento anche di una sola fornitura, può ritenere che qualsiasi "esclusività", se esistente, del prodotto non sia più applicabile. La fattura emessa ai sensi del presente articolo dovrà comunque essere pagata dal Cliente prima della consegna del Prodotto.

10.3 Cambiamenti nella situazione finanziaria o aziendale dei clienti

Qualsiasi evento o comportamento che possa sollevare dubbi sulla solvibilità del Cliente o sul suo desiderio o possibilità di pagare o ricevere il Prodotto fornito può essere considerato un motivo per la sospensione della fornitura del Prodotto da parte di C.Matic. C.Matic, in tal caso, deve inviare al Cliente una specifica comunicazione. Dal ricevimento della comunicazione di cui sopra, tutti i debiti del Cliente nei confronti di C.Matic sono da considerarsi immediatamente dovuti e le relative somme pagabili. Quanto qui menzionato è in deroga a qualsiasi accordo in senso contrario che potrebbe essere stato fatto con il Cliente. C.Matic avrà inoltre il diritto di ritirare il Prodotto fornito ma non pagato dai magazzini o dagli impianti del Cliente. Con il presente il Cliente autorizza C.Matic a richiedere e ottenere dall'autorità giudiziaria, anche con carattere di urgenza, qualsiasi misura necessaria. A partire dalla data di invio della comunicazione di cui al presente paragrafo, al Cliente sarà richiesto, irrevocabilmente, di pagare, in anticipo, qualsiasi somma richiesta per le successive forniture del Prodotto, e ciò è in deroga sia agli ordini esistenti, anche se accettati da C.Matic, che a qualsiasi condizione di fornitura, anche se concordata ed esistente tra C.Matic e il Cliente, in ogni caso soggetto al diritto di C.Matic di sospendere le consegne e risolvere il contratto esistente.
Laddove il Cliente sia soggetto a procedure di insolvenza (procedure di concordato, amministrazione controllata, fallimento, liquidazione forzata, amministrazione speciale, accordo di ristrutturazione del debito, ecc.) C.Matic può, in conformità con le norme specifiche in materia di recupero dei crediti, sospendere le ulteriori forniture, ritenere risolto il contratto e revocare l'eventuale esclusività del prodotto. Il Cliente è tenuto a comunicare a C.Matic qualsiasi modifica significativa della propria struttura aziendale o della propria organizzazione amministrativa e gestionale, nonché l'eventuale firma di atti di vendita o affitto dell'attività o parti della stessa anche mediante accordo preliminare. C.Matic, dopo aver valutato tali informazioni o qualora le stesse siano state acquisite autonomamente, può comunicare al Cliente la propria intenzione di non proseguire il rapporto, sospendendo anche l'esecuzione di ordini già accettati. In tal caso, tutti i crediti di C.Matic sono da intendersi immediatamente dovuti e l'esclusività del prodotto, se esistente, revocata.
C.Matic può in ogni caso trattenere, a titolo di maggior danno, gli anticipi o qualsiasi altra somma recepita fino a quel momento.

10.4 Crediti del cliente

Il Cliente non può, per nessun motivo, anche in caso di controversia riconosciuta da C.Matic, emettere, senza il consenso di C.Matic, note di addebito o fatture per crediti accertati a lui dovuti o, in ogni caso, addebitare a C.Matic somme di cui quest'ultima non si è, espressamente e per iscritto, riconosciuta come debitore. Il Cliente non può, in ogni caso, salvo autorizzazione scritta, compensare o trattenere somme dovute, per qualsiasi motivo, a C.Matic a fronte di propri crediti presunti o accertati; in tal caso, C.Matic può richiedere gli interessi per mancato o ritardato pagamento e sospendere le forniture successive.

10.5 Riserva di proprietà

Il Prodotto viene fornito con la formula e la garanzia per C. Matic di "Riserva di proprietà", in modo tale che il prodotto rimanga di proprietà di C.Matic fino a quando il Cliente non avrà adempiuto ad ogni obbligo che, per qualsiasi motivo, possa esistere nei confronti di C.Matic.
Il Cliente dovrà mettere in atto qualsiasi misura necessaria alla protezione e alla salvaguardia del diritto di "Riserva di proprietà" e sarà responsabile per eventuali conseguenze che potrebbero influenzare il prodotto stesso. La "Riserva di proprietà" non implica una deroga a quanto previsto ai punti 7.2 e 7.3 in relazione al trasferimento del rischio e della responsabilità per il trasporto e alla custodia del prodotto stesso.
Il Cliente è tenuto ad attuare ogni misura utile a non confondere il prodotto di C.Matic con altri prodotti C.Matic che potrebbero risultare simili e deve conservare il prodotto in spazi opportunamente separati e facilmente identificabili.
Il Cliente è tenuto a informare i propri clienti, in particolare in caso di trattamento effettuato per conto di terze parti, dell'esistenza della garanzia di "Riserva di proprietà" a favore di C.Matic, autorizzando espressamente quest'ultima, in caso di mancato pagamento da parte del Cliente o su richiesta da parte dello stesso di ammissione a procedure di insolvenza, procedure di concordato o simili, a recuperare, anche tramite provvedimento giudiziario di urgenza, e a spese del Cliente, il Prodotto fornito e non ancora interamente pagato. Allo stesso modo, il Cliente deve acconsentire al prelievo, in via amichevole, del Prodotto da parte di C.Matic, qualora richiesto, salvo nei casi in cui il Cliente abbia adempiuto a tutti gli obblighi esistenti nei confronti di C.Matic e pagato tutte le somme dovute a C.Matic a qualsiasi titolo.

11. RESPONSABILITÀ

11.1 Definizione di responsabilità di C.Matic

C.Matic sarà responsabile per la corretta produzione del prodotto e per il rispetto delle caratteristiche fornite nell'ordine. Il Prodotto sarà fabbricato in conformità con la legislazione UE esistente. Sarà responsabilità del Cliente comunicare tempestivamente qualsiasi specifica disposizione normativa o amministrativa al di fuori del territorio nazionale italiano o che possa riguardare la produzione o l'imballaggio del Prodotto.
C.Matic non sarà mai responsabile per difetti del Prodotto quando questi sono attribuibili a:

- materiali forniti dal Cliente o da terzi indicati dal cliente.
- errori di progettazione o pianificazione quando tali attività vengono effettuate dal Cliente o da terze parti indicate dal Cliente.
- utilizzo di apparecchiature indicate o fornite dal Cliente o da terze parti indicate dal Cliente.
- trattamenti, manipolazioni, trasformazioni, trattamenti della superficie o elaborazioni eseguite sul Prodotto senza il consenso scritto di C.Matic.
- uso non conforme, non consentito, anomalo, atipico o particolare.
- stoccaggio, trasporto, conservazione o manipolazione di scarso livello.
- normale usura del Prodotto o deterioramento dello stesso imputabile a eventi riferibili al Cliente o a terzi.
- mancato rispetto di raccomandazioni, indicazioni o suggerimenti di C.Matic in relazione a manutenzione, conservazione o utilizzo del prodotto.

11.2 Limiti di responsabilità

La responsabilità di C.Matic, salvo quanto di seguito indicato, sarà in ogni caso limitata ai danni diretti causati a cose o persone del Cliente o al relativo utilizzo, dovuti a guasti o difetti del Prodotto riconosciuti da C.Matic come imputabili ad esso. È esclusa qualsiasi responsabilità per danni indiretti, perdita dell'immagine, perdita di entrate, perdita di guadagno, costi, affari, profitto, costi per interruzioni della produzione anche di terzi o, in ogni caso, come conseguenza indiretta del difetto del prodotto, anche se il difetto viene riconosciuto da parte di C.Matic. Allo stesso modo, C.Matic non può essere in alcun modo ritenuta responsabile per danni che il Prodotto può aver causato a terzi una volta assemblato, venduto singolarmente o insieme al prodotto del Cliente.
In nessun caso C.Matic può essere ritenuta responsabile per mancanza di prestazioni oltre a quelle indicate in catalogo. Il Cliente, alla consegna del prodotto, rinuncia irrevocabilmente al diritto di agire nei confronti di C.Matic in merito a qualsiasi altro tipo di reclamo non concernente la responsabilità di C.Matic, la cui estensione è limitata a quanto indicato nel presente paragrafo. Inoltre, è da escludersi qualsiasi responsabilità di C.Matic in caso di violazione di diritti di proprietà di terzi, tranne nei casi in cui il Cliente è in grado di provare la conoscenza da parte di C.Matic dell'esistenza di brevetti o diritti di proprietà.
In ogni caso, il limite di responsabilità di C.Matic è da intendersi vincolato al valore del prodotto fornito e riscontrata la non idoneità da parte di C.Matic. C.Matic può essere esonerata da qualsiasi responsabilità offrendo al Cliente un prodotto sostitutivo dello stesso tipo e con le stesse caratteristiche tecniche. Il Cliente rinuncia, in ogni caso, con la consegna o la ricezione della conferma di disponibilità del prodotto, al diritto di avanzare reclami di altro tipo o aggiuntivi rispetto a quelli indicati nel presente documento, fermo restando che il Cliente rinuncia irrevocabilmente al diritto di richiedere danni o risarcimenti di qualsiasi natura.

12. GIURISDIZIONE

La fornitura del prodotto e qualsiasi conseguenza derivante dall'esecuzione del contratto o, in ogni caso, qualsiasi evento connesso o finalizzato alla conclusione del contratto e/o dell'ordine, saranno sempre e comunque obbligatoriamente sottoposti alla giurisdizione italiana e alle leggi in vigore in Italia, con esclusione della validità e dell'applicabilità delle giurisdizioni o delle normative straniere.
C.Matic può, a sua esclusiva discrezione, ritenere applicabile, anche giurisdizioni straniere, al fine di proteggere i propri diritti di credito o quelli conseguenti alla fornitura.

13. FORO COMPETENTE PER LE CONTROVERSIE

C.Matic e il Cliente si impegnano a fare tutto il possibile per risolvere in via amichevole eventuali controversie che potrebbero insorgere tra di loro per qualsiasi motivo connesso o derivante dalla fornitura del prodotto.
In ogni caso, qualsiasi controversia che potrebbe sorgere in relazione al rapporto tra le parti o per qualsiasi altra ragione o conseguenza connessa o risultante dalla fornitura del Prodotto, o dall'interpretazione o esecuzione, anche parziale, del contratto in essere tra il Cliente e C.Matic, si intende demandata, salvo decisione diversa da parte di C.Matic a seguito del diritto di cui al precedente paragrafo, alla giurisdizione e responsabilità esclusiva e obbligatoria del Foro di Monza.
In caso di controversie derivanti da ciò, C.Matic avrà il diritto di recuperare tutte le ragionevoli spese legali, i costi e le spese da questa sostenute per far valere i diritti sottoindicati di C.Matic.

GENERAL TERMS OF SUPPLY

1. GENERAL NOTES

The following general terms of supply are understood to be valid and applicable in all commercial practices of C.Matic with reference to all products manufactured or sold by C.Matic.
These general terms constitute the legal basis for every contract entered into by C.Matic except where, in specific orders or agreements, they are expressly waived in writing.
These terms prevail over any purchase terms of the Customer and constitute an essential part of the supply contract implemented by C.Matic in favour of the Customer.
The general terms of supply set out below, therefore, relate to all contracts and all orders implemented even if not expressly confirmed by the Customer.
These general terms of supply, in any case, are understood to be automatically accepted by the Customer and, therefore, an integral part of the order, upon C.Matic 's Product first being made available to the Customer and, in any case, upon the implementation of the order by C.Matic.

2. SCOPE OF APPLICATION OF THE CONTRACT

The following will be an integral part of the contract entered into by C.Matic:

a) these general terms of supply, which are understood, in any case, to be applicable irrespective of express written acceptance by the Customer.
b) every technical document, study, report, in any capacity sent by C.Matic to the Customer.
c) the order confirmation
d) the delivery note
e) the invoice

Advertising documents, sales brochures, samples, catalogues, price lists and anything else used or sent by C.Matic prior to or during implementation of the supply will not be considered, unless it is expressly agreed in written, essential elements of the contract.

3. ORDERS AND CONTRACT FORMALIZATION

Any quotation of C.Matic is subject to, and shall not become binding upon C.Matic until (i) actual receipt by C.Matic of customer's written order based on all the terms and conditions stated herein, and (ii) C.Matic's written acceptance of such order at its main office.
Order means any document containing the identification details of the supply to be made, such as quantity, product type and price. The order is understood to be transformed into a finalized contract both in the case of express acceptance by C.Matic by any written means (fax, e-mail, etc.) or upon implementation of the first supply to the Customer.
Implementation of the supply means the material made available to the Customer as provided at point 7.2 below.
Even in the presence of discrepancies between the offer, the order received from the Customer and the order acknowledgment sent by C.Matic, the contract will in any case be understood to be established and finalized for the purchasing party.
C.Matic may, at its sole discretion and at any time, not accept orders from the Customer or interrupt or suspend, with sufficient prior notice, the execution of planned orders.

3.1 Closed order

Closed order means that order in which the quantity of the product, price, delivery methods and timescales are expressly identified.

3.2 Blanked or planned order

"Blanked" order means that order which, having established the type of Product and unit price of the same, in general, indicates the quantities of product estimated as consumable by the Customer in the period of time expressly indicated and agreed between C.Matic and the Customer (week/month/year). C.Matic and the Customer will determine the quantities that the Customer irrevocably buys within the agreed timeframe to get the fixed price. C.Matic shall modify the price of the Products in case the Supplier doesn't reach, within the fixed period, the agreed volume of sales.
The liability of C.Matic in any case is limited to the quantity agreed or, in case the order includes a minimum and a maximum quantity, to the minimum.
C.Matic is not required to guarantee the supply of additional quantities of Product or to comply with more burdensome delivery time than those expressly accepted by C.Matic itself.
If the customer ask to modify the content of any order C.Matic shall not be obligated to satisfy that request, but will make every effort to satisfy the request made by the Customer. In case of acceptance, C.Matic shall be allowed to modify the price of the Products.
For this purpose C.Matic shall communicate to the Customer the difference in price of the Product: that variation is understood to apply in the case of express acceptance by the Customer or will be considered to be "in force" commencing from the first delivery of the product after C. Matic's communication.

3.3 Changes to orders

Any request to change the contract made by the Customer shall be subject to express acceptance by C.Matic. In the absence of express acceptance by C.Matic, the contractual conditions previously agreed will be understood to be unchanged, subject, in any case, to the applicability of these general terms of supply.

3.4 Cancellation of closed order or reduction below the minimum quantities of blanked orders

In no case, except in circumstances of force majeure, the Customer may cancel the closed order or reduce the minimum quantities of any type of orders.
If the Customer intends to proceed in that sense, it must notify its request in writing to C.Matic which, in the following 30 days, may accept or refuse the request made or indicate to the Customer the cost for acceptance.
Failing that, the Customer will be required to collect and pay for the product in accordance with what was agreed or in accordance with the maximum quantities indicated or agreed in the blanked orders.
In the indication of the cost for the cancellation or reduction, depending on the contract, of the open or blanked order below the minimums, C.Matic may take account of all costs incurred and being incurred for procurements also of raw materials and provisions, equipment and specific or other tools, research and design costs and, in any case, all costs and/or direct and indirect consequences that have for any reason economic significance for C.Matic.
C.Matic may retain, on a final basis, and on account of anything due in addition, any sums received from the Customer paid for any reason.

4. PREPARATORY AND/OR ACCESSORY WORKS RELATING TO THE ORDER

4.1 Designs and requirements

All documents, designs, estimates, technical reports, evaluations, offers, analyses and, in any case, any information or document that, in any capacity, the Customer and C.Matic have exchanged prior to or during the implementation of the order, are understood to be sent only for the specific use for which they are intended without that transmission involving a transfer of ownership or usage rights.
The recipient may not in any case use what is received for other purposes.
The Customer and C.Matic will reciprocally maintain all property rights, including intellectual, on the documentation being exchanged. The Customer and C.Matic are understood to be bound to the strictest confidentiality and secrecy, as agreed at point 6 below, in relation to the existence and content of the documents being exchanged.
In cases of use other than what is permitted or what has been planned for the material being exchanged, the injured party will be entitled to compensation for damages. The Customer acknowledges, in any case, the exclusive ownership of what is received in any capacity from C.Matic and that it constitutes C.Matic 's know-how.

4.2 Return of samples

All samples, prototypes, pre-series or semi-finished products or in any case artefacts sent by C.Matic to the Customer are and shall remain the property of C.Matic and the Customer may use them only for the purposes set out in the contract entered into with C.Matic. The Customer will be liable for the custody of what is received and undertakes to return all the material received upon termination of the contract or within 15 days from C.Matic making an express request for the same.
The Customer shall use what is received in the strictest secrecy and confidentiality and may not in any way utilize, even to perform tests, directly or indirectly, anything received from C.Matic without the prior written consent of the latter.
If any sample or model is shown or delivered to the Customer, the Customer acknowledges that such sample or model was used merely to illustrate the general type and quality of goods and not to represent that the goods would necessarily comply with the sample or model.
In cases of breach of this clause, C.Matic may suspend the supplies and claim compensation for damages.

4.3 Conservation of equipment

The equipment even subject to wear, necessary to create the Product for the Customer, is understood, unless otherwise agreed in a written deed, to be under the exclusive ownership of C.Matic. The tools for production will be designed by C.Matic or by a company instructed by the same, and will take account of the working methods, systems and equipment normally used by C.Matic.
C.Matic may ask the Customer to contribute to the costs for what is indicated above. That cost may even not be expressly specified, but included in the price of the product being delivered. Even in that case, the tools necessary for production will remain under the exclusive ownership of C.Matic without any contribution guaranteeing for the Customer rights of use or ownership, even only intellectual or by way of know-how.
C.Matic, unless otherwise agreed by written deed, may freely use the equipment and, in general, any work tool, even for productions other than that intended for the Customer and also in the case of production created exclusively for the Customer.

5. CHARACTERISTICS AND CONDITION OF ORDERED PRODUCTS

5.1 Use of Products

C.Matic undertakes to produce the Product in the respect of the technical specifications agreed with the Customer (special products) or as specified in the catalog (standard product). The Product will also be compliant with the safety rules in force in EU in that regard. The Customer will be solely liable for the use of the Product.
The Product must be used exclusively in accordance with what is indicated in the catalog or agreed in writing with C.Matic.
C.Matic shall not be liable for the consequences of any unauthorized, incorrect or different use of the Products with reference to what it's stated in C.Matic's catalog or that is different from what is authorized in writing by C.Matic.
Where the Customer must use the Product in a manner other than that agreed, it must provide specific information thereof to C.Matic.
C.Matic, upon receiving the request, will have 30 days to confirm its willingness to satisfy the request of the Customer also providing an indication of the timescales and the new price; the Customer shall confirm in writing the acceptance of the communication received from C.Matic.
Except where previously agreed or in any case known to C.Matic, the Product supplied may not be stored in locations in which materials are stored, including potentially explosive, polluting or flammable materials, or in rooms where the moisture or temperature levels are not compliant with the type of Product being delivered.
The Customer accepts, hereby waiving the right to make any claim or complaint, that the quantities indicated by C.Matic are always understood to be with an allowance of +/- 5%.
The Customer undertakes, in any case, to accept even partial supplies of Product.

5.2 Product Packaging

C.Matic shall supply the product packaged in accordance with its standards and compliant with existing regulations in relation to safety.
The Customer, by sending the order, expressly declares to be aware and to have accepted the type of packaging used by C.Matic and to deem the aforementioned "standard" to be suited to its requirements, to transportation, handling, deposit and storage; all activities that will occur at the care and expense of the Customer.
The Customer will be solely liable for the correct deposit and storage of the Product, activities that must be implemented in such a way as to allow for the correct conservation of the technical and functional characteristics of the Product supplied. No liability may be attributed to C.Matic in the event of use of different packaging to that used by C.Matic or for deposit, storage or handling of the product performed in a manner not compliant with the product characteristics.

5.3 Transmission of information relating to the Product

The Customer undertakes to make its purchasers aware of the technical-functional characteristics of the Product.

6. INTELLECTUAL PROPERTY RIGHTS AND CONFIDENTIALITY CLAUSE

6.1 Intellectual property rights and on technical know-how

C.Matic is the only owner of rights relating to any information, data, design, characteristic, process, chemical composition, functional feature and for all and any element relating to the Product. The ownership of those rights will remain even after the delivery of the Product. The implementation of the supply contract will not constitute, in any case, transfer of industrial property rights or licence to use the know-how relating to the Product and/or to the production process, C.Matic, as owner of the rights set out above, reserves the right to use for its own purposes, the results of verifications, tests or experiments performed in any way on the Product, even after delivery.

6.2 Confidentiality clause

The Customer, during the supply relationship and for 5 years after its conclusion, will be required scrupulously to respect the confidentiality and secrecy of everything of which, on the occasion of implementing or preparing the contract, it becomes aware (documents, data, characteristics, elements, technical information, prices, designs, graphics, reports, outlines, notes, etc.).
The Customer undertakes to store all the material received from C.Matic with the same care and in respect of the most scrupulous secrecy as though what was received or exchanged were its own exclusive property.
C.Matic and the Customer must only allow persons involved in the implementation of the supply to have access to the data, documents and all material received.
The Customer expressly declares to be compliant with the procedures for the respect of privacy as provided by existing regulations.
If necessary, C.Matic and the Customer will appoint, notifying the other of his/her name, a person responsible for managing any sensitive data that may be transmitted.
The confidentiality and secrecy obligation shall not apply in the case of:

- information that is in the public domain or in any case was already known at the time of entering into the contract.
- information already in possession prior to entering into the contract.
- disclosure obligation of information when required by a Judicial Authority or a Public Authority in general.

Any breach of this clause will entitle C.Matic to claim compensation for damages and/or the termination of the contract.

6.3 Guarantee against counterfeiting

Where the Product is custom-made, or produced in accordance with indications or information provided by the Customer, the latter will be solely liable for any infringement, even relating to the production process, of rights of third parties in relation to industrial property and it undertakes to hold harmless C.Matic from each and any direct or indirect consequence that the availability or use, in any capacity, of that information or the Product itself may cause, directly or indirectly, to C.Matic or to third parties. The Customer will, finally, bear directly or in any case will keep C.Matic indemnified for all direct and indirect damages and for all costs, including of legal support or any other professional reason, even technical, including the fees of Professionals instructed by C.Matic in the event of legal or extrajudicial action or for mediation, brought against C.Matic or by it due to any infringement of the obligations set out in this clause.

7. DELIVERY, TRANSPORTATION, VERIFICATION AND ACCEPTANCE OF PRODUCT

7.1 Delivery term

C.Matic will make any effort to respect the delivery term agreed with the Customer.
In no case, however, may the delivery date be deemed as mandatory and binding for the correct implementation of the order.
The Customer expressly waives the right to make any claim for damages or reimbursement in any capacity or to request the termination of the contract in cases of failure to respect the delivery term of the Product.
As stated above all delivery dates are approximate and C.Matic shall not be responsible for any damages of any kind resulting from any delay.
C.Matic reserves the right to communicate, by any means, to the Customer any changes to the delivery term when the change is of particular significance. The Customer may request that C.Matic makes its best efforts to improve the delivery but in no case it may refuse to pay for the Product.
C.Matic reserves the right to suspend, indefinitely, the delivery of the Product in the event of non-payment of the supplies. Similarly, in any case of non-fulfillment, C.Matic may, if existing, deem the exclusivity of the product reserved to the Customer to be terminated and no longer in existence.

7.2 Delivery terms (Ex-works)

Unless otherwise agreed, the delivery of the Product will be made "Ex-works" and is understood to be executed on the day and time on which the loading of the goods on the vehicle used by the carrier or shipping agent is completed or, in any case, from the communication made by C.Matic of the availability of the goods.
From the above date, the Customer will be transferred all rights and responsibilities relating to the Product even if physically still stored at C.Matic 's plant.
The Customer is required to collect the Product directly or indirectly within 5 days from the notification of availability of the goods. In the event of a delay in collecting the goods beyond the aforementioned term, C.Matic will charge to the Customer all costs and disbursements that are necessary for storage, deposit and handling of the goods.
C.Matic will issue for that reason the corresponding invoice which must be paid before collecting the Product and in any case by the terms set out in point 10.1.
Once 10 days have elapsed from the notification that the goods are ready for delivery, C.Matic may, at its sole discretion, subject to the obligation for the Customer to pay the costs as indicated above, sell the Product to third parties, destroy it at the expense of the Customer, or reuse it, charging to the Customer all consequent costs. The invoice issued for that reason is understood to be payable immediately. Similarly, in the event of non-collection of the Product, by the term indicated above, C.Matic may deem any exclusivity, if existing, granted to the Customer terminated, even with reference to the continuation of the contract with the Customer.
C.Matic shall in good time send to the Customer or to the conveyor the "goods ready for delivery" notification. The Customer, or the conveyor under Customer's responsibility, shall collect the Product at the date and time indicated in the "goods ready for delivery" notification as received from C.Matic. Where the goods are not collected in accordance with what is stated in the "goods ready for delivery" notification, the Customer shall bear any cost, disbursement or expenditure for any reason (deposit, insurance, handling, storage, use of space, etc.) incurred by C.Matic as already specified above.

7.3 Transportation, customs charges, insurance

Unless otherwise expressly provided in the order, the transportation will always be performed at the care and expense of the Customer which shall, if deemed necessary, and under its exclusive liability, insure the Product during transportation.
Where C.Matic takes responsibility for shipping the Product to the destination, the transfer of risk will occur when the Product is delivered to the first shipping agent or the first haulier.
The Customer shall always bear, unless otherwise agreed, the customs charges, freight and costs of storage at destination, proceeding, if due, to fulfill the shipping, loading, unloading and customs clearance procedures, irrespective of the means of transport chosen by the Customer.
The Customer shall offer to C.Matic proof of the customs clearance of the product and its receipt.
C.Matic, however, will never be required to insure the Product irrespective of the agreed delivery methods.

7.4 Check of quantities and type of Product delivered

The Customer shall check quantitates and weight of the Product by way of its own personnel, the conformity of the Product with the order terms; that check will be conducted at the cost of the Customer and under its exclusive responsibility as soon as the delivery is made.
Any dispute or reservation relating to clear defects of the Product shall be noted immediately on the consignment docket, CMR, way bill or transportation document. A copy of the consignment docket, way bill or transportation docket with the respective reserves or disputes shall be sent for information to C.Matic which, in any case, will not be liable for any shortages and will not be liable for reserves made by the Customer except where it is proven that the defect subject to the reserve was already existing at the time of delivery of the product at the plant of C.Matic. In the absence of reserves noted on the consignment docket, CMR, way bill or transportation document, the Product, from the perspective of type and quantities, will be understood to be accepted on a final basis, with express irrevocable waiver for the Customer of the right to claim in any venue, for that reason, rights of any nature.

7.5 Dispute in relation to existence of defects

C.Matic is required to deliver the Product free from defects and compliant with the order.
The quality of the Product is understood to refer to the "standard" of C.Matic, as well-known to the Customer.
The Customer, in the case of defects existing in the Product, shall, under penalty of forfeiture within 10 calendar days from the delivery, dispute the Product supplied, sending to C.Matic an appropriate written communication containing the list of defects or faults, the number of items on which the same have been identified, the methods by which the checks were performed, the batch number and any useful evidence to allow C.Matic exactly to identify the Product subject to dispute.
The Customer, if requested by C.Matic, shall return, at the care and expense of the Customer, the Product subject to dispute.
C.Matic, at its sole discretion, and without this constituting any acknowledgement of any liability, may repair the product, sending it back to the Customer. In that case, C.Matic will bear the transportation costs.
Where C.Matic does not identify the presence of the disputed defects or faults, it can invite the Customer to its own plant

to jointly assess the results of its investigations, after which the Product will be sent back to the Customer at its expense.
C.Matic, however, may, at its sole discretion, and without this constituting any acknowledgement of liability, proceed to replace the disputed Product, sending a new one to the Customer.
In no case may the Customer suspend payment of the Product even if it is subject to total or partial dispute. Similarly, even in the case of total or partial dispute of the supply made, the Customer may not suspend the payment of any sum for any reason due to C.Matic.
The Customer may not, for any reason, autonomously perform or have performed by third parties processes or interventions on the Product. In that case the Product will no longer be guaranteed, meaning, in addition, that the Customer irrevocably waives the right to claim in any venue any liability by C.Matic.
Where the Customer, in the presence of clear defects or faults, decides not to inform C.Matic of them and uses, assembles or sells the Product, it will lose any right to the replacement or repair of the Product.
Similarly, the guarantee provided by C.Matic, in accordance with point 7.6 below, is also understood to be terminated.
In any case, subject to an indication to the contrary sent by C.Matic, the Customer shall take exclusive responsibility for the activity and cost of disassembly, storage, disposal of the Product subject to dispute and the activity and cost of assembling the new, reworked or re-sent Product by C.Matic to the Customer.
Any complaints or disputes do not exonerate the Customer from the obligation of honouring any obligation accepted towards C.Matic, irrespective of the reason for which the obligation was contracted.

7.6 Guarantee - duration

C.Matic, unless otherwise agreed, guarantees the Product supplied for a period not exceeding twelve months. The guarantee is understood to commence from the "goods ready for delivery" notification or from the day of the ex-works delivery.
The guarantee shall be effective in the case of correct use of the Product and when the malfunctioning of the same or the defect identified in the Product is not also indirectly or partially attributable to the Customer or to the end user or in the case of inconsistent or unauthorized use of the Product.

7.7 Acceptance

Once the term of 10 days has elapsed from delivery of the product and in the absence of disputes, the Product supplied will be understood to be definitively accepted and the Customer will have forfeited the possibility of making any claim, protest or request whatsoever.
In no case after the acceptance has been made will C.Matic be required to replace or repair the Product supplied or bear any cost or disbursement even by way of damages.

8. ADVERSITY CLAUSE AND CAUSES OF FORCE MAJEURE

8.1 Conditions for changing the prices of the Product

C.Matic may change the prices of the Product even after acceptance of the order and conclusion of the contract. C.Matic shall notify the Customer in writing the new price, indicating the reasons for which that change is necessary. The new price will be binding for the Customer commencing from the first delivery after the communication or in any case once 10 calendar days have elapsed from the communication sent to the Customer.
C.Matic, where exceptional events occur that make the implementation of the order particularly burdensome, may terminate or withdraw at any time from the contract, cancel the order or delivery program, without the Customer being able to claim, with that right being understood to be irrevocably waived, any reimbursement or compensation.

8.2 Causes of force majeure

C.Matic may suspend its supply obligations and, in any case, the contractual commitments with the Customer in any case of Force Majeure. Where C.Matic intends to invoke that right it must promptly inform the Customer in writing, indicating the invoked cause of Force Majeure and, if possible, the expected duration of the suspension of the contractual obligations assumed. If the cause of suspension protracts for more than 90 working days, the Customer may, temporarily, source the Product it requires from another supplier, subject to the commitment, for the Customer, once the cause of Force Majeure has ended, to repurchase the Product from C.Matic.
C.Matic undertakes to communicate in writing to the Customer the termination of the cause of Force Majeure, also indicating the date of first delivery of the Product after the Force Majeure event.
The Customer is required to accept those deliveries. If the case of Force Majeure protracts for more than 90 days, C.Matic and the Customer will meet in order to assess the possibility of deeming the supply contract to be terminated.
In any case, the Customer shall collect and pay for all the Products in storage at C.Matic, the cost of the semi-finished products, raw materials, paper and anything that was specifically purchased or produced by C.Matic to implement the supply. C.Matic may also invoke Force Majeure in all cases where its performance becomes particularly onerous or impossible. The following circumstances constitute Force Majeure, by way of an indicative but not comprehensive list:
- natural disasters (earthquakes, fires, floods, storms, etc.).
- armed conflicts, wars, disputes, attacks, uprisings, terrorist acts.
- trade union or labor conflicts or disputes, lock-outs, general and industry strikes or strikes at the plant of C.Matic or C.Matic s of the same.
- trade union conflicts or disputes, general or industry or plant strikes or lock-outs, even if relating to C.Matic s of C.Matic, hauliers, service companies, shipping agents, post offices in general or, in any case, all those involved in the production process.
- orders of judicial, government or public authorities in general.
- prohibitions on import, embargoes, blocks on production imposed by the health or public authority in general.
- accidents at work, seizures, machine faults, explosions, power shortages and any and every event that might limit or exclude the possibility of production.
- shortages or excessive cost of raw materials.

Where the Customer intends to invoke cases of Force Majeure, it must promptly inform C.Matic.
In that case, the Customer shall also indicate to C.Matic the methods by which the Product may be collected, possibly even in a different location to that agreed, with the Customer, in that case, bearing the greater cost that C.Matic will indicate.
In no case may the Customer invoke Force Majeure to suspend the payments of supplies

9. DEFINITION OF PRICES

The prices indicated by C.Matic are all understood to be net of taxes, rates, duties on the Product. Unless otherwise agreed, the prices are in any case understood to be "ex works". Unless otherwise agreed, the prices will always be expressed in Euros.

10. PAYMENTS

10.1 Payment Terms

The payment of supplies, unless otherwise agreed, shall occur, at the domicile of C.Matic, irrespective of any disputes, upon receipt of the pro-forma or of the invoice in advance. C.Matic may allocate the payments received at its sole discretion, providing information thereof to the Customer.
C.Matic shall not be required to agree any discount in cases of early payment of the Product.

10.2 Payment Delays

Subject to what is indicated in this contract, in cases of non-payment of the Product within the term identified in point 10.1, interest will accrue in favour of C.Matic amounting to the rate established by Italian Legislative Decree 231/2002.
C.Matic is authorized to issue an invoice for interest in accordance with the methods set out in this point and to send it to the Customer.
The invoice will also include the costs that C.Matic has incurred for that activity. The Customer must immediately proceed with the payment of what is due. Where an invoice is issued for interest and/or costs for delayed payment, C.Matic may, at its sole discretion, allocate all payments subsequently made by the Customer to settle the invoice for interest and costs and, only for any residual amount, to payment of the Product supplied.
C.Matic may also, in the case of non-payment, suspend the delivery of the Product, refuse the request for further deliveries and/or deem the contract terminated or also the commitment made to process any subsequent orders of the Product.
Similarly, C.Matic, in the case of non-payment by the payment date of even just one supply, may deem any "exclusivity", if existing, of the product no longer to apply. The invoice issued in accordance with this article shall, in any case, be paid by the Customer prior to collecting the Product.

10.3 Changes in the financial or corporate situation of customers

Any event or conduct that might lead to doubts about the solvency of the Customer or its desire or possibility to pay or collect the Product supplied may be considered a reason for the suspension of the supply of the Product by C.Matic.
C.Matic, in that case, must send to the Customer a specific communication. From receipt of the aforementioned communication, all debts of the Customer towards C.Matic shall be understood to be immediately due and the sums all collectable, and this is in derogation of any agreement to the contrary that may have been made with the Customer.
C.Matic will also be entitled to take the Product supplied but not paid from the warehouses or plants of the Customer. The Customer hereby authorizes C.Matic to request and obtain from the judicial authority and also as a matter of urgency any measure required.
From the date of sending the communication referred to in this paragraph, the Customer will be required, irrevocably, to pay, in advance, any sum requested for subsequent supplies of the Product, and this is in derogation of both existing orders, even if accepted by C.Matic, and any supply condition even if agreed and in existence between C.Matic and the Customer, subject in any case to C.Matic 's right to suspend the deliveries and terminate the existing contract.
Where the Customer is subject to insolvency proceedings (arrangement with creditors, receivership, bankruptcy, forced liquidation, special administration, debt restructuring agreement, etc.) C.Matic may, in compliance with the specific regulations in relation to recovery of credits, suspend the further supplies, deem the contract terminated and revoke any exclusivity, if existing, of the product. The Customer is required to communicate to C.Matic any significant change to its corporate structure or its managerial-administrative organization or the signature of deeds of sale or rental of the business or branches of the same even by way of preliminary agreement. C.Matic, having assessed that information or where the same has been acquired autonomously, may communicate to the Customer its intention not to continue the relationship, also suspending the implementation of orders already accepted. In that case, all credits of C.Matic shall be understood to be immediately due and the exclusivity, if existing, of the product revoked.
C.Matic may in any case retain, by way of greater damages, the advances or anything collected up until that time.

10.4 Credits of the Customer

The Customer may not, for any reason, even in cases of dispute recognized by C.Matic, issue, without the consent of C.Matic, debit notes or invoices for credits even ascertained to be due to it or in any case charge C.Matic sums of which the latter has not, expressly and in writing, acknowledged to be the debtor of. The Customer may not, in any case, except with written authorization, offset or retain sums due for any reason to C.Matic against its own alleged or ascertained credits; in that case, C.Matic may claim interest for non-payment or delayed payment and suspend the subsequent supplies.

10.5 Retention of Title

The Product is supplied with the formula and guarantee for C.Matic of "Retention of Title", such that the product will remain the property of C.Matic until the Customer has fulfilled every obligation for any reason existing towards C.Matic.
The Customer shall implement every measure necessary for the protection and safeguarding of the right of "Retention of Title" and will be liable for any consequence that might derive to the product itself. The "Retention of Title" does not imply a derogation of what is provided at points 7.2 and 7.3 in relation to transfer of risk and liability for transportation and custody of the product itself.
The Customer is required to implement every useful measure so as not to confuse C.Matic 's product with another possibly similar product of other C.Matic's, and it must store the product in spaces appropriately separated and easily identifiable.
The Customer is required to inform its customers, particularly in the case of processing performed on behalf of third parties, of the existence of the "Retention of Title" guarantee in favour of C.Matic, expressly authorizing the latter, in the case of non-payment by the Customer or a request by the same for admission to insolvency proceedings, arrangement with creditors or similar, to recover, even by urgent judicial measure, and at the expense of the Customer, the Product supplied and not yet paid for in full. Similarly, the Customer must consent to the amicable collection of the Product by C.Matic, where requested by it, except where the Customer has fulfilled every obligation in place with C.Matic and paid every debt for any reason existing towards C.Matic.

11. LIABILITY

11.1 Definition of liability of C.Matic

C.Matic will be liable for the correct production of the product and for complying with the characteristics provided in the order. The Product will be produced in compliance with existing EU legislation. It will be the responsibility of the Customer to communicate in good time any specific regulatory or administrative provision outside the Italian national territory or that may relate to the production or packaging of the Product.
C.Matic will never be liable for defects of the Product when these are attributable to:
- materials supplied by the Customer or by third parties indicated by the customer.
- design or planning errors when those activities are implemented by the Customer or by third parties indicated by the Customer.
- use of equipment indicated or provided by the Customer or by third parties indicated by the Customer.
- treatments, manipulations, transformations, surface treatment, or processing performed on the Product without the written consent of C.Matic.
- non-compliant, non-permitted, anomalous, atypical or particular use.
- poor storage, transportation, conservation or handling.
- normal wear of the Product or deterioration of the same attributable to events referable to the Customer or to third parties.
- lack of compliance with recommendations, indications or suggestions of C.Matic in relation to maintenance, conservation or use of the product itself.

11.2 Limits of Liability

The liability of C.Matic, except as stated hereinafter, will in any case be limited only to direct damages caused to things or persons of the Customer or used by the same due to faults or defects of the Product recognized by C.Matic as attributable to the same. Any liability for indirect damages, loss of image, loss of income, loss of earnings, costs, loss of business, of profit, costs for production shutdowns even of third parties or in any case as an indirect consequence of the defect of the product, even where the defect is recognized by C.Matic, is excluded. Similarly, C.Matic may never be liable for damages that the product may have caused to third parties once the Product is assembled, sold autonomously or together with the product of the Customer.
In no case C.Matic will be liable for lack of performance in addition to those indicated in the catalog. The Customer, upon delivery of the product, irrevocably waives the right to take action against C.Matic for any other claim that is outside the liability of C.Matic, the extension of which is that limited to what is stated in this paragraph. Similarly, any liability of C.Matic is excluded in the case of infringement of any property rights of third parties except where the Customer can prove the knowledge by C.Matic of the existence of patents or property rights.
In any case, the limit of liability for C.Matic is understood to be fixed at the value of the product supplied, and accepted as defective by C.Matic. C.Matic may be exempted from any liability by offering to the Customer a replacement product of the same type and with the same technical characteristics. The Customer waives, in any case, with the delivery or receipt of confirmation of the availability of the product, the right to make any other or additional claims than those indicated herein, being understood that the Customer irrevocably waives the right to claim damages or compensation of any nature.

12. JURISDICTION

The supply of the product and any consequence deriving from implementation of the contract or, in any case, any fact connected to or aimed at the conclusion of the contract and/or the order, will always and in any case, mandatorily be submitted to Italian jurisdiction and to the laws in force in Italy, with the validity and applicability of foreign jurisdictions or regulations being excluded.
C.Matic may, at is sole discretion, deem applicable, even foreign jurisdictions, to protect its rights of credit or those consequent to the supply.

13. COURT WITH JURISDICTION FOR DISPUTES

C.Matic and the Customer undertake to make all their best efforts to settle amicably any disputes that might arise between them for any reason that is connected to or results from the supply of the product.
In any case, any dispute that might arise in relation to the relationship between the parties or for any other reason or consequence that is connected to or results from the supply of the Product, or the interpretation or execution, even partial, of the contract in place between the Customer and C.Matic, shall be understood to be devolved, unless decided differently by C.Matic as a result of the right set out in the previous paragraph, to the exclusive and mandatory jurisdiction and responsibility of the Court of Monza.
In the event of any litigation arising herefrom, C.Matic shall be entitled to recover all reasonable attorney's fees, cost and expense incurred by C.Matic in enforcing any C.Matic's right hereunder.

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